BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF UPDATING )
THE ADOPTED REGIONAL TRANSPORTATION)
PLAN )

ORDINANCE NO. 83-161

THE COUNCIL OF THE METROPOLITAN SERVICE DISTRICT HEREBY ORDAINS:

Section 1. The 1983 Update, dated September 1983, to the Metropolitan Service District Regional Transportation Plan, copies of which are on file with the Clerk of the Council, is hereby adopted effective October 6, 1983.

Section 2. In support of the above Plan Update, the Findings attached hereto as Attachment "A" are hereby approved.

ADOPTED by the Council of the Metropolitan Service District this 6th day of October, 1983.

Cindy Banzer
Presiding Officer

ATTEST:

Cleeta Flanigan
Clerk of the Council

6088B/308

ATTACHMENT A

FINDINGS

1. In 1979, Metro was designated by the Governor as the Metropolitan Planning Organization for the Oregon urban portion of the Portland metropolitan area to receive and disburse federal funds for transportation projects pursuant to Title 23 (Highways) and Title 49 (Transportation) Code of Federal Regulations and Oregon Revised Statutes - Chapter 268.

2. Adoption of a functional plan for transportation by Metro is required by State law to establish the relation to local comprehensive plans and necessary by federal regulations to maintain the eligibility of the region to receive federal transportation funds.

3. Metro staff completed a comprehensive effort to develop a Regional Transportation Plan (RTP) which was adopted by the Metro Council on July 1, 1982.

4 The adopted RTP provides for an annual update to incorporate additional Plan elements, policies and decisions from major planning studies, and recommendations for newly identified improvements to the region's transportation system.

5. The 1983 RTP Update as adopted by the accompanying Ordinance is consistent with the Statewide Land Use Planning Goals as is indicated by the following paragraphs:

   Goal #1 - Citizen Participation. The Joint Policy Advisory Committee on Transportation (JPACT) provided a forum for elected officials and representatives of agencies involved in transportation projects to evaluate the transportation needs in this region and to oversee the development of the RTP Update. JPACT's membership includes nine elected officials from local governments within the region, two Metro Councilors, representatives of the agencies involved in regional transportation issues (Port of Portland, Oregon Department of Transportation, Tri-Met and Oregon Department of Environmental Quality), and representatives from governments and agencies of Clark County, Washington and the State of Washington.

   While JPACT provided a forum for input to the RTP Update on a policy level, the Transportation Policy Alternatives Committee (TPAC) provided the opportunity for input on a technical level for staff from the same agencies and governments represented in JPACT plus representatives of the Federal Highway Administration (FHWA), Federal Aviation Administration (FAA), Urban Mass Transportation Administration (UMTA), the Regional Planning Council of Clark County and five citizen representatives appointed to TPAC by the Metro Presiding Officer.

In addition to these standing Metro committees, considerable input was also received directly from local jurisdictions and two local transportation committees--the East Multnomah County Transportation Committee and the Washington County Transportation Committee.

In addition to the public hearings held by the Metro Council, the major policy additions contained in this Plan Update are the result of the adoption of two major planning documents by the Metro Council: the Westside Corridor Preferred Alternatives Report and the Regional Bike Plan. Both of these efforts contained extensive public involvement opportunities and citizen input.

Goal #2 - Land Use Planning. The RTP Update is based on a population and employment growth forecast to the year 2000 using the adopted local comprehensive land use plans of the region's jurisdictions. The forecasts were developed in a cooperative manner through a series of workshops attended by representatives from the cities and counties in the region as well as other interested agencies.

Goals #3 and #4 - Agricultural Lands and Forest Lands. This action is not inconsistent with Goals #3 and #4. Efficient provision of transportation services within the Urban Growth Boundary (UGB) is essential to reduce premature pressures to develop rural agricultural and forest land.

Goal #5 - Open Spaces, Scenic and Historic Areas, and Natural Resources. This action is not inconsistent with Goal #5. Projects recommended in the Plan Update that significantly impact these resources are required by federal law to prepare detailed environmental impact documentation to determine potential adverse effects and outline actions to mitigate the unavoidable effects.

Goal #6 - Air, Land and Water Resources Quality. The air quality impacts of transportation will be lessened by the implementation of the RTP and its Updates. In addition, the RTP is in conformance with plans adopted to meet federal carbon monoxide and ozone standards. The adoption of the RTP Update is not inconsistent with the land and water resources aspects of Goal #6.

Goal #7 - Areas Subject to Natural Disasters and Hazards. The RTP Update is based on the inventory of known areas of natural disaster and hazard contained in the local comprehensive plans and is not inconsistent with Goal #7.

Goal #8 - Recreational Needs. This Plan Update is consistent with Goal #8 in that the accessibility to developed recreational areas in the region will be improved.

Goal #9 - Economy of the State. Adoption of an RTP Update is necessary for certification of the region and continued receipt of federal transportation construction funding. The receipt of these funds is essential to the ability of the region to service expected urban development. In addition, numerous development opportunities in the region are significantly dependent on the improved access provided by projects in the RTP Update.

Goal #10 - Housing. One of the key limiting factors in the residential development called for in the local comprehensive plans is an adequate urban infrastructure of streets to serve that development. The implementation of the RTP Update would provide that urban infrastructure.

Goal #11 - Public Facilities and Services. This Plan Update does not change the RTP established framework whereby local jurisdictions, the ODOT and Tri-Met can provide necessary transportation services in a coordinated and cost-effective manner. This action satisfies the Goal #11 dictate "to plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban...development."

Goal #12 - Transportation. The adoption of the RTP Update furthers the establishment of the region's functional transportation plan required by Goal #12.

Goal #13 - Energy Conservation. The implementation of the RTP Update will further the reduction of the transportation-related energy consumed in the region from what will occur without implementation of the Plan.

Goal #14 - Urbanization. Efficient provision of transportation services is essential if the planned urbanization of land within the UGB is to occur. The adoption of the RTP Update will improve the framework for the provision of those transportation services.

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# PRELIMINARY

1983 UPDATE

OF THE

REGIONAL TRANSPORTATION PLAN

FOR THE

PORTLAND METROPOLITAN AREA

September 1983

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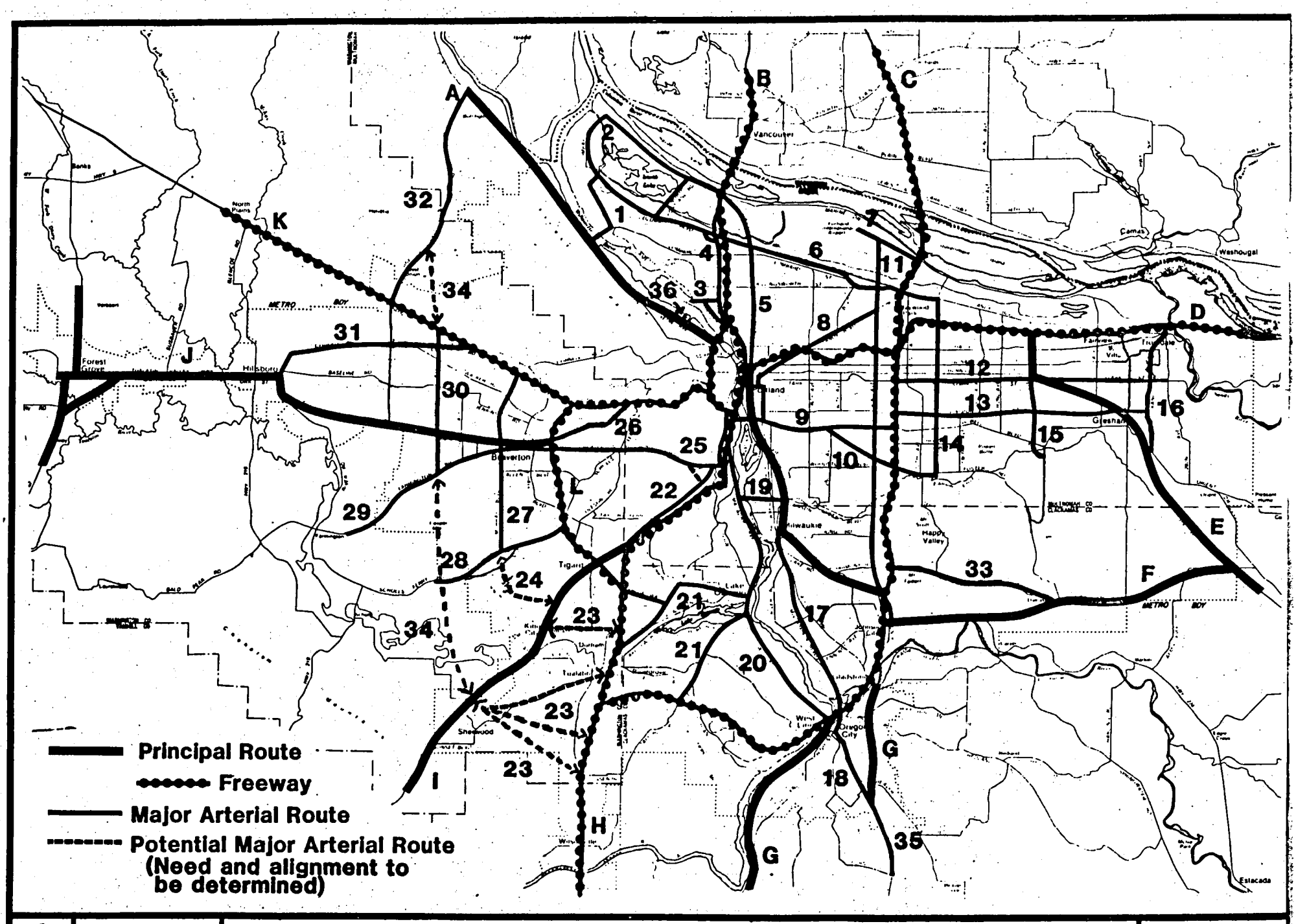
# REGIONAL TRANSPORTATION PLAN SUMMARY

## A. OVERVIEW

The objective of the Regional Transportation Plan (RTP) is to identify a transportation system that will adequately serve the travel needs of the fast growing Portland metropolitan area. If growth continues without adequate transportation investment, the level of mobility now enjoyed throughout the region is in danger of being lost and, with it, economic prosperity. In addition, the government's ability to maintain and improve the transportation system is declining as conventional revenue sources fall short of needs.

The adopted RTP represents a cost-effective package of transportation improvements needed to serve the region. It consists of investments to improve both the transit and highway system as well as actions to reduce the high cost of serving peak hour travel through rideshare and flextime programs. The RTP policy directions and recommended improvements knit together numerous past transportation decisions and enables the region to work toward implementing a cohesive transportation system that serves the development envisioned in local comprehensive plans. The RTP is focused primarily on identifying the components of the "regional system," on ensuring the regional system meets established mobility objectives and on defining the extent of Metro interest in the "local system." Adoption of the RTP represents the following:

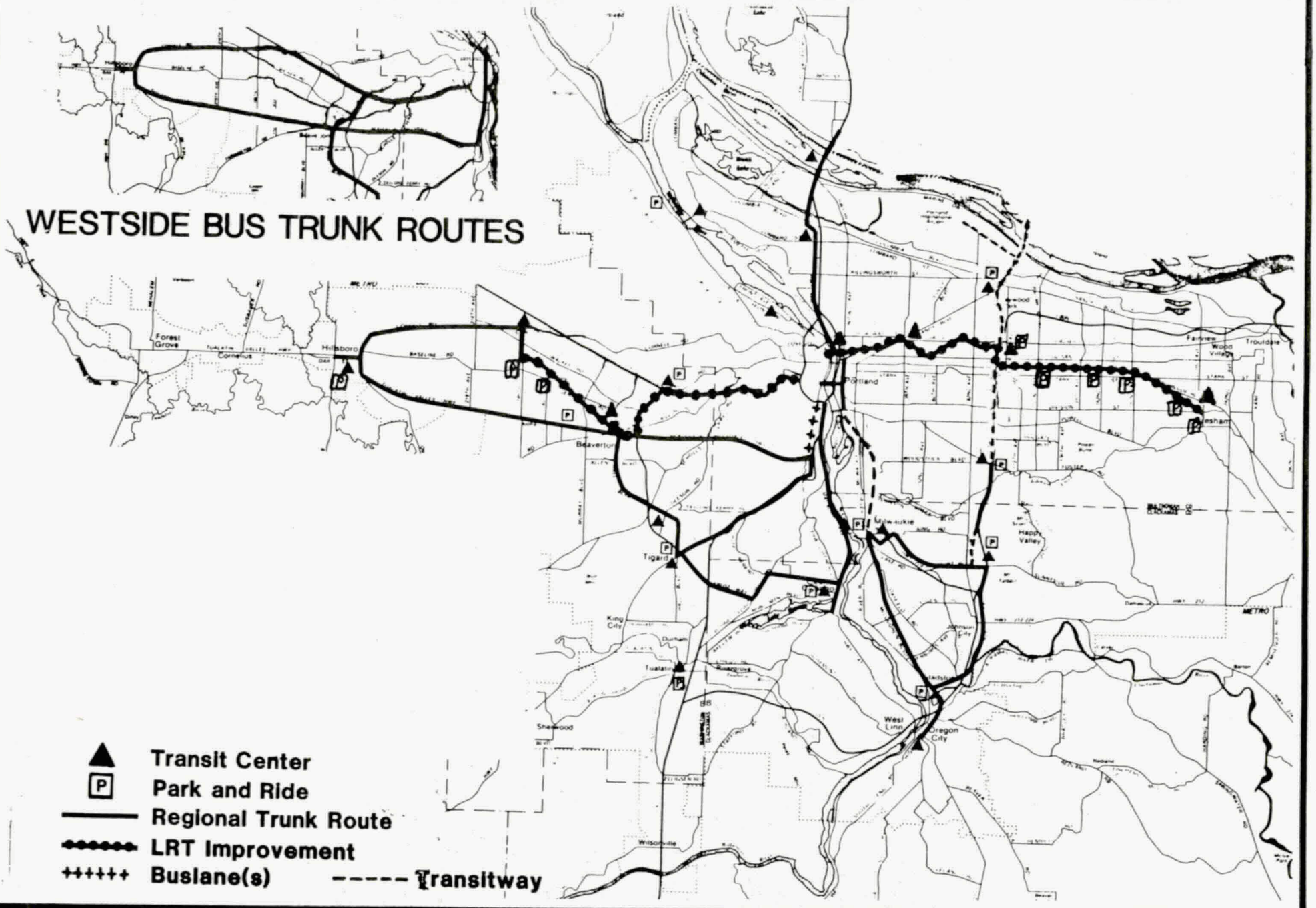
- endorsement of the interrelated roles, service concepts, and long-range direction of the highway system, transit system and "demand management programs" (such as programs to encourage carpooling and flextime);
- endorsement of the designation of the Principal and Major Arterials (Figure 1), and Regional Transit Trunk Routes (Figure 2), Regional Transitways (Figure 3) and the Regional Bicycle Route System (Figure 3a);
- endorsement of the overall level of funding required for transportation investment needed to serve expected growth to the year 2000;
- recognition of the need to update the RTP to respond to changing growth trends, public attitudes, improved technology, financial resources, and other socio-economic conditions;
- endorsement of the need for new revenue sources and intent to seek those funds; and
- endorsement of the population and employment forecasts (for 20 districts throughout the region) to be used as the basis for regional transportation decision-making.




Regional Transportation Plan

# PRINCIPAL ROUTES & MAJOR ARTERIALS

FIG. 1

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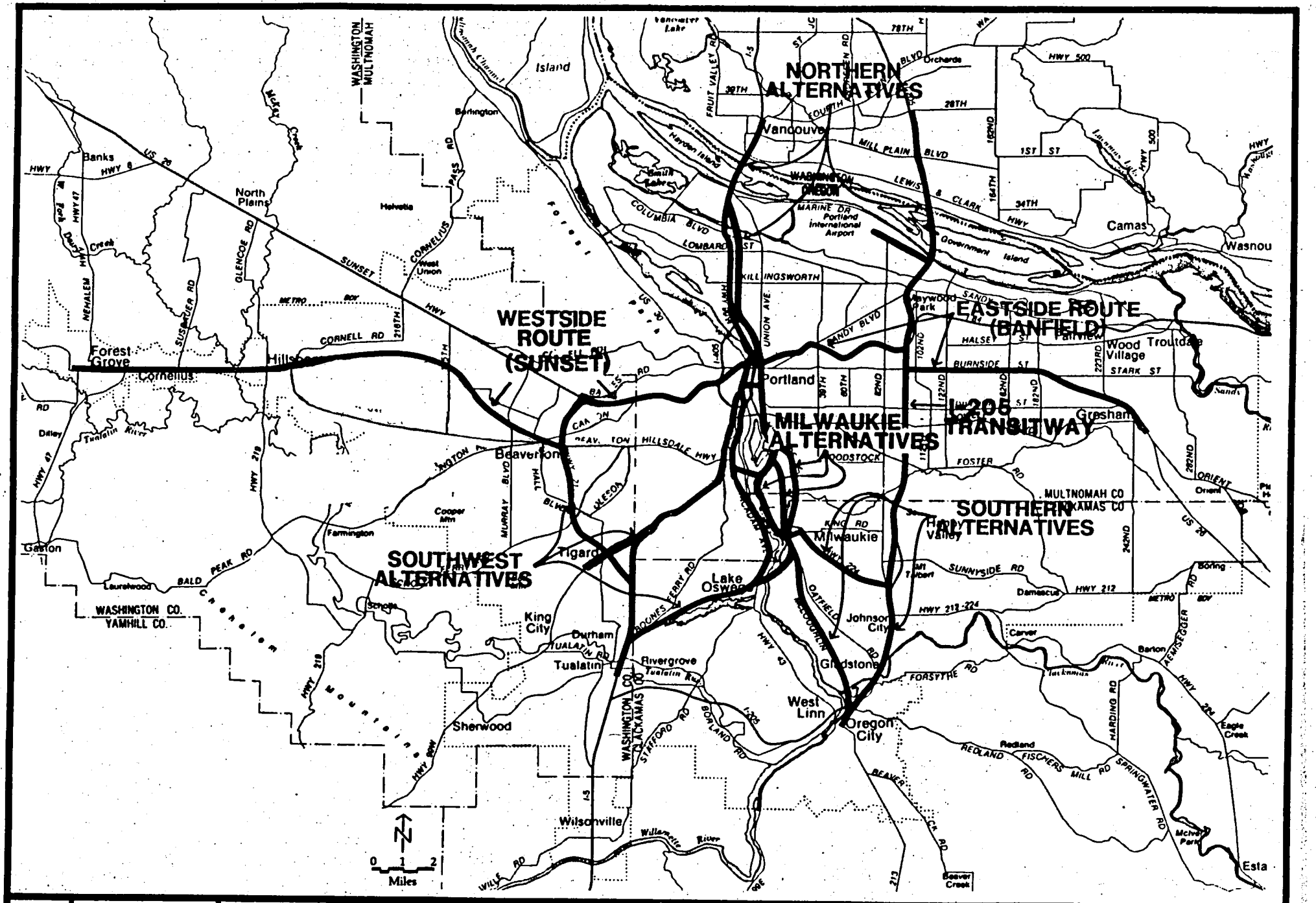
# REGIONAL TRANSIT TRUNK ROUTES

FIG. 2

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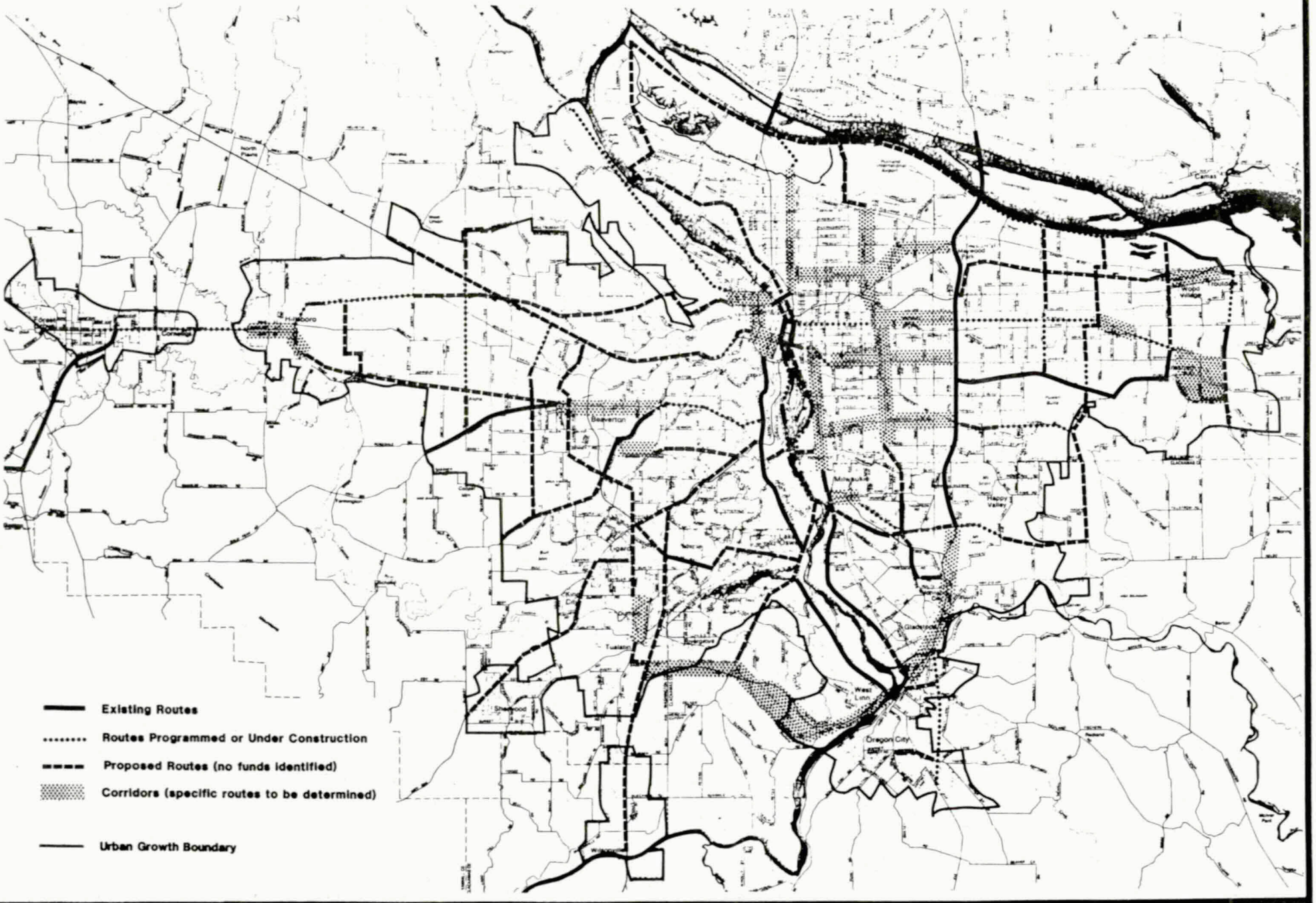
# LONG RANGE REGIONAL TRANSITWAY SYSTEM

FIG. 3

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# REGIONAL BICYCLE ROUTE SYSTEM

FIG. 3a

B. BENEFITS ASSOCIATED WITH THE RECOMMENDED TRANSPORTATION INVESTMENTS

The RTP represents a substantial public financial commitment and requires developing new sources of revenue. Implementing the transportation investments called for in the Plan would produce:

- acceptable levels of service on our highway and transit systems;
- maintainance of accessibility to jobs, shopping and other business;
- facilitation of the development pattern envisioned in local comprehensive plans; and
- enhancement of the region's economic prosperity and quality of life.

If the region were to develop as called for in local comprehensive plans with only those transportation projects under construction in 1981 completed (including I-205 and the Banfield LRT and highway project), severe traffic conditions would exist throughout the region. In particular, the I-5 North and South corridors, Westside and McLoughlin Corridor would be overloaded since these are the major growth areas. This, in turn, would cause reduced access to job and shopping opportunities and increased difficulty in moving goods and services. In addition, as these travel conditions worsen, the economy would automatically react and force a different land use pattern than that called for in local comprehensive plans. In general, two major development changes would be noticeable:

- an overall loss of economic development from the region to other parts of the country; and
- a shift to focus more development along the I-205 corridor where major underused transportation investments will be in place.

The conditions can be averted, however through the timely implementation of the transportation investments presented in the Plan.

Affected Areas

The development potential of major portions of the region would be enhanced as a result of the recommended transportation investments. Among these are central Portland, Washington County and port facilities along the Willamette River.

Central Portland: Access to downtown Portland is now constrained by the capacity of the various bridges and freeways that serve it. Major increases in transit capacity to downtown would allow the area to grow from its current 82,000 employees to the planned level of 128,000. Transportation investments are also recommended to provide adequate access to enhance the

economic viability of the central eastside, northwest Portland and Swan Island.

Washington County: With limited transportation capacity between Washington County and Portland and an inadequate street system in Washington County, the level of planned residential development on the Westside would be reduced. Since Washington County contains nearly 40 percent of the vacant urban land designated for new residential development, removing this limitation on growth has a major positive impact on the entire metropolitan area.

Port Facilities: Traffic improvements throughout the I-5 North corridor would have a beneficial impact on port facilities along the Willamette River. The implementation of investments to improve highway access and lessen of the traffic burden through higher transit ridership will enhance the viability of existing port facilities and future economic development.

Region-wide, the improvements and programs called for in the RTP will provide the necessary transportation capacity to support the broad population and employment gains envisioned in the local comprehensive plans.

## C. ADOPTED TRANSPORTATION PLAN

The adopted RTP consists of an integrated program to provide needed mobility through:

- highway improvements;
- transit service expansion; and
- "demand management"[1] programs.

These three types of actions provide the most cost-effective approach to improving the transportation system and each must be implemented to complement one another. The transportation actions called for in the RTP include the following:

### Radial Corridors

In the major highway corridors that radiate from downtown Portland, improvements are recommended to remove bottlenecks and bring the highway system up to a consistent capacity; ramp metering is recommended to ensure the freeways operate properly; additional capacity beyond that available through highway improvements must be provided by transit capacity and demand management programs.

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1 "Demand Management" programs consist of actions to encourage ridesharing, flextime and the use of bicycles to reduce the high travel demand during peak hours and, therefore, lower the need for public investments.

Circumferential Corridors

In the major corridors that skirt downtown, the freeways should be completed (Highway 217 and I-205) and an adequate circumferential transit trunk route system should be established to carry travel between suburban parts of the region without going through downtown.

Suburban Areas

A basic urban street system is needed in the outlying areas as they become less rural and more urban; extensions of the transit system should occur with residential development to serve suburban employment concentrations and to ensure high transit ridership between Portland and the surburban areas.

Economic Development

Highway access improvements are needed in numerous areas to promote development of industrial areas, port facilities and commercial centers (Figure 4).

Transit

A doubling of the capacity of the transit system is needed through the use of more cost-efficient Light Rail Transit (LRT) vehicle, and articulated buses.

Ridesharing

An increase in ridesharing from the current 23 percent to 35 percent of all work trips by auto is needed through voluntary/incentive programs.

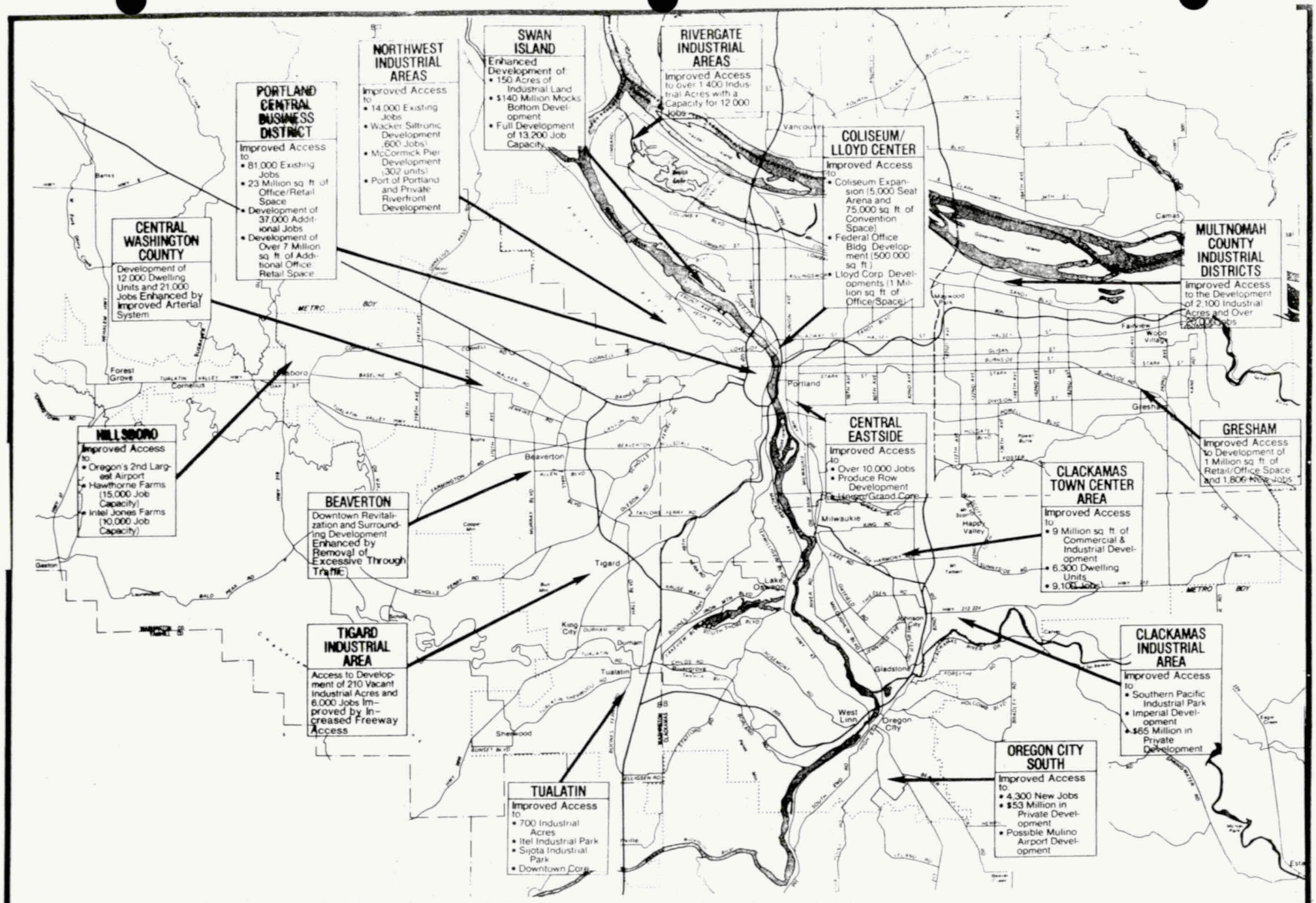
Light Rail Transit

The full implementation of the transit system calls for a region-wide LRT system with service in each of the major radial and circumferential trunk route corridors. However, since this exceeds the financial capacity of the region at this time, the rights-of-way for these corridors should be protected and the system should be implemented corridor-by-corridor as transit demand increases and revenues are available.

D. COST AND FINANCING OF THE PLAN

As of early 1982, the costs to implement and operate the RTP (in 1980 dollars) are comprised primarily of the following elements:

| | 1980 Annual Cost | 2000 Annual Cost |
|---|---|---|
| Highway Maintenance | $40-45 m/year | $55 m/year |
| Highway Reconstruction | $ 5-10 m/year | $25-35 m/year |
| Public Financing for Transit | $41 m/year | $52-58 m/year |

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# ECONOMIC DEVELOPMENTS AFFECTED BY RECOMMENDED TRANSPORTATION IMPROVEMENTS

FIG. 4

Highway Capital Cost - $600 million
Transit Capital Cost - $460-640 million
Bicycle Capital Cost - $14 million

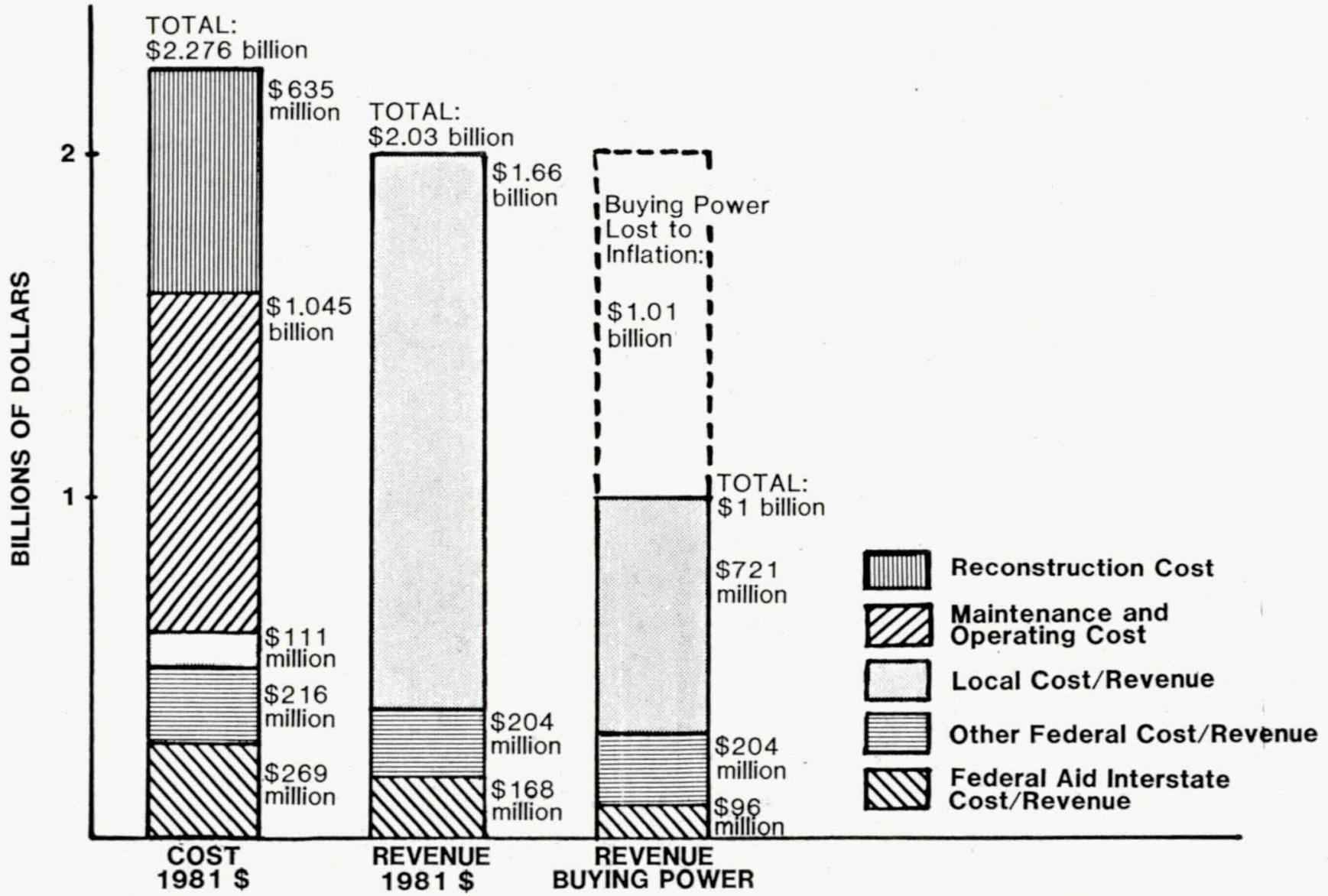
The increased cost of highway maintenance is necessary to account for reductions in maintenance programs throughout the region during the past five to ten years due to funding shortfalls. A regular program of highway reconstruction does not exist and severe deterioration due to deferred maintenance is prevalent in many areas, particularly Washington County. Transit operating costs are expected to double consistent with the major expansion in transit service, however, public financing for transit is only expected to increase by 20-40 percent (in 1980 dollars) due to the larger vehicles and a more efficient route structure. As indicated by the range in public financing for transit ($52-58 million), it is more economical to expand transit with LRT because future operating costs are lower. The transit capital costs include bus acquisition, construction of stations, park and ride lots and maintenance facilities. Again, the range of costs is due to the high cost of building a second LRT line. The highway capital costs include major interstate freeway, arterial and local improvements throughout the region. The bicycle capital costs include only these facilities required to implement the regional bicycle route system; costs to implement local systems would require funding beyond that amount.

Financial Analysis

Revenue sources currently dedicated to transportation purposes are as follows:

- 8¢/gal state gas tax, weight-mile tax, vehicle registration; this state "Highway Trust Fund" is partially pro-rated to the cities and counties for local needs with the balance available to the Oregon Highway Division for maintenance and improvement to State facilities;
- Multnomah County 3¢/gal gas tax, Washington County 1¢/gal gas tax;
- Washington County - three-year $27 million serial levy;
- miscellaneous receipts from forestry, parking meters and local improvement districts;
- six percent employer payroll tax to Tri-Met; and
- federal funding for capital improvements, including:
  - Interstate Transfer Funds
  - Interstate Funds
  - miscellaneous other federal highway funds, including "Federal-aid Urban" and "Federal-aid Primary" funds
  - Section 3 transit capital assistance
  - Section 5 transit operating assistance.

As shown in Figure 5, revenues available to improve and maintain the highway system could fall short by as much as

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# COMPARISON OF TOTAL HIGHWAY RELATED COSTS AND REVENUES (1982 - 2000)

FIG. 5

50 percent. This is due to our extreme dependence on a fixed-rate gas tax as the primary source of revenue in a time when gasoline consumption is declining. As a result, fewer dollars are collected while costs continue to increase. In addition, the traditional formulas for disbursing gas taxes generally provide funding according to where the population is located and where an adequate street system is already in place. The major growth areas of the region, where the population will locate, do not have sufficient funds to build an adequate urban street system.

As shown in Figure 6, revenues are available to continue to operate the existing transit system plus the Banfield LRT but are insufficient for the major transit expansion called for in the RTP. Additional operating support of $10-15 million per year is needed plus the necessary federal capital assistance. Like the payroll tax, this revenue source should be elastic to expand with inflation.

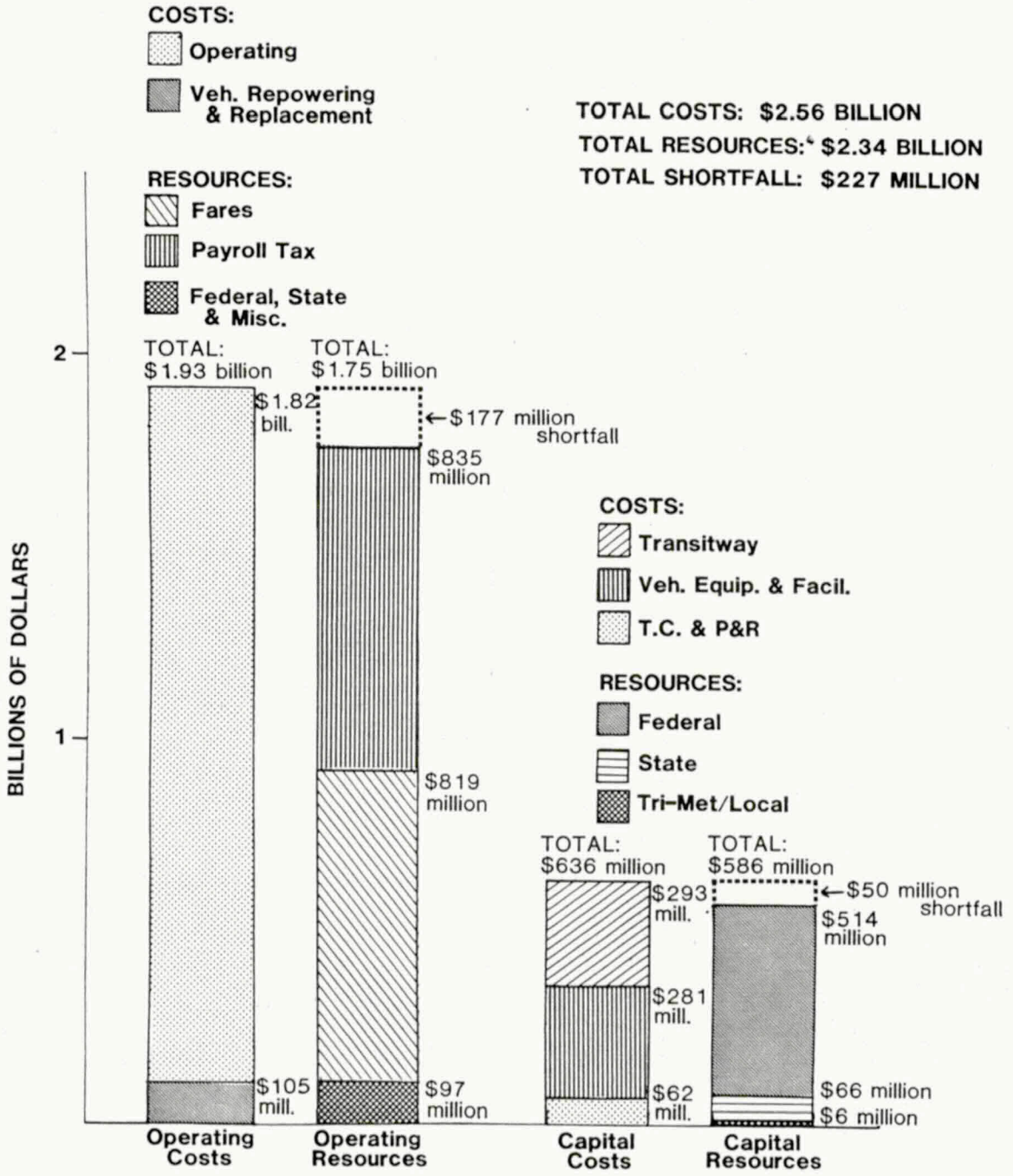
## E. CONCLUSIONS

The RTP demonstrates that public investment in the transportation system is essential to the economic prosperity of the region. Furthermore, in a time when public funding is increasingly scarce, the RTP represents a cost-effective package of transit and highway improvements, using each mode where it is best suited.

Despite the high cost of implementing the plan, it constitutes a very conservative and prudent use of public funds. Efforts have been taken to minimize the need for high cost improvements through programs to increase auto occupancy and spread out the high peak periods (demand management). Highway projects have been scaled down to include only the most essential elements. The transit system will have to operate much more productively (carrying more riders per service hour) than today in order to assume the increased role called for.

Existing funding sources are woefully inadequate to support the needs of a growing region. With the continuing loss of purchasing power provided by the fixed-rate gas tax, this region does not have sufficient revenue to even maintain the existing system over the next 20 years, much less expand it to support economic development. Transit financing is adequate to operate the existing system and allow for a very moderate expansion but is insufficient to support the major expansion that is necessary.

Even with new sources of revenue to fund all the transportation improvements envisioned in this plan, the public will have to lower its service expectations slightly and be willing to accept a minimally higher level of congestion on the the highway and transit system. To maintain or improve current service levels would require an even greater level of public investment in transportation improvements.

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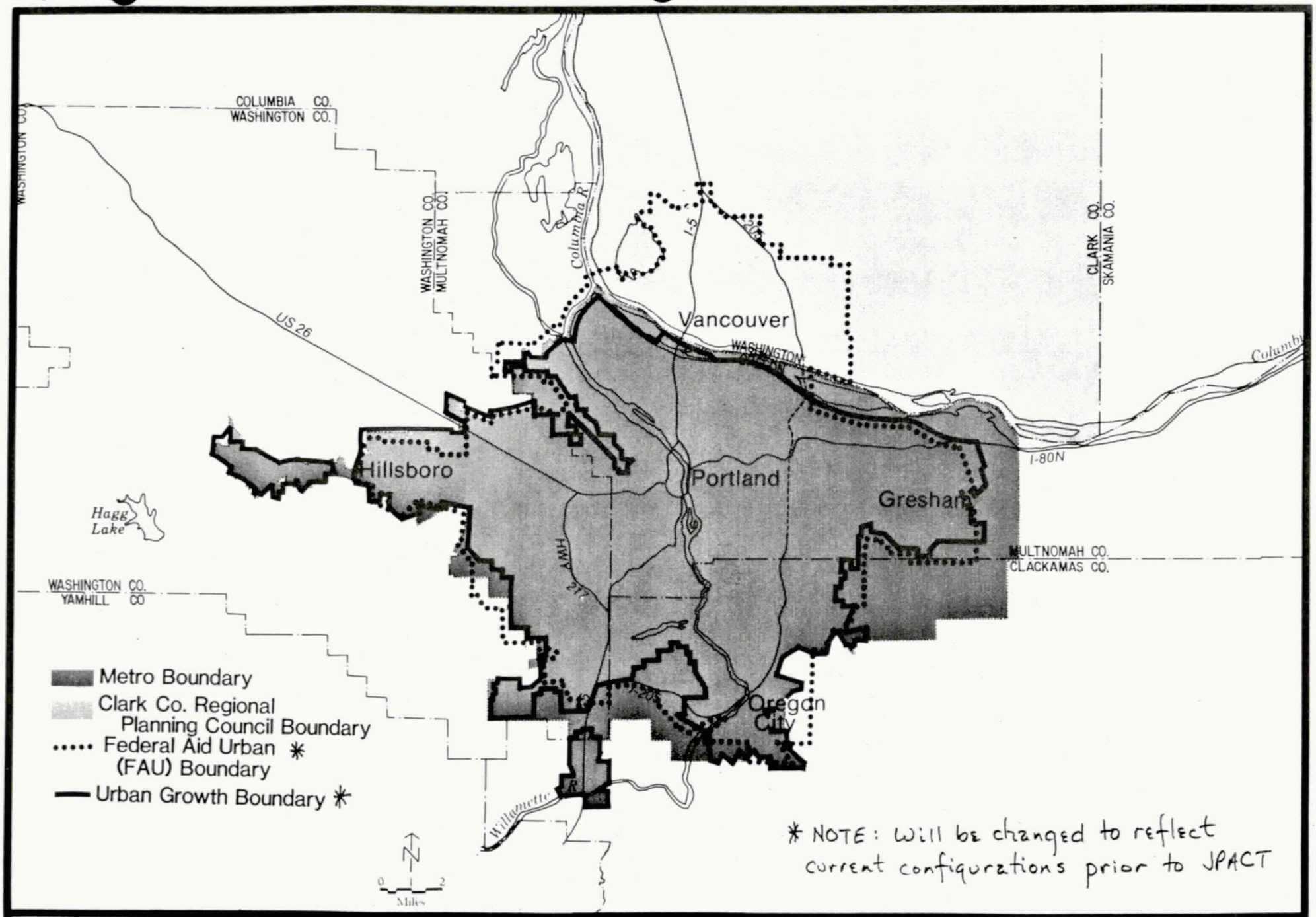
**SUMMARY OF RTP TRANSIT SYSTEM COSTS & RESOURCES--LRT OPTION (1980-2000, BILLIONS OF 1980 DOLLARS)**

**FIG. 6**

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# COMPARISON OF BOUNDARIES

FIG. I-3

1981 A Bi-State Task Force studied the I-5 and I-205 connections between Oregon and Washington and concluded that a third bridge was not a cost-effective project and that capacity improvements could be achieved through better traffic management and the expansion of transit service and rideshare programs in the I-5 and I-205 corridors.

1982 This RTP was adopted by Metro after thorough public review and consensus among the local jurisdictions in the region, providing a framework for transportation planning and cost-effective investments over the next two decades.

1983 The Regional Bicycle Plan element of the RTP was adopted by Metro to define regional policy with respect to bicycle facilities and programs and to provide guidelines for encouraging the use of bicycles as an alternate mode of transportation. The full text of the adopted Bicycle Plan is included in the RTP as Appendix B.

1983 The Sunset LRT was selected by the region as the preferred alternative to connect downtown Portland and Beaverton (to 185th) as the result of the Westside Corridor Project alternatives analysis and extensive public review and comment. The decision to proceed to construction will not be made until after the completion of a FEIS on the project and an evaluation of one year's operation of the Banfield LRT.

## C. REGIONAL TRANSPORTATION PLAN GOALS AND OBJECTIVES

The preceding decisions clearly illustrate an evolving regional transportation policy direction that recognizes the interrelationship between the need to provide adequate levels of mobility and the reality of fiscal and environmental constraints. An effective plan to serve a growing metropolitan area must address these concerns and provide an adequate balance among mobility, cost and environmental impact.

### Mobility

Mobility for personal travel and goods movement throughout the metropolitan area is the principal objective of the transportation plan. An adequate level of mobility is needed for access to jobs, shopping and other personal business, social and recreational pursuits, commerce and Statewide and Interstate travel. Without mobility, the economic prosperity of the region will diminish as development is curtailed by lack of adequate access.

### Cost

A cost-effective transportation system will provide adequate levels of mobility to the users while minimizing the overall cost of the system and, therefore reduce the need for public

investment. Certain situations require increased investments in one element in order to save a greater amount of capital cost in another element. The cost-effectiveness of the transportation system as a whole, therefore, is dependent on solutions that provide adequate capacity at the lowest total cost.

Environmental Impact

A basic assumption in the development of a regional transportation plan is that transportation systems do more than meet travel demand. Transportation systems have a significant effect on the physical and socio-economic characteristics of the areas they serve. Transportation planning must be viewed in terms of other fundamental regional and community goals, such as protection and enhancement of a pleasant and healthy environment and the maintenance of desirable social and economic structures. Because of the multiple values which must be considered, goals will sometimes be in conflict. There are no rigid priorities which can be applied to all situations. Each program must be evaluated in terms of the extent to which it best achieves an overall balance between conflicting goals.

Systemwide Goals and Objectives

The overall goal of the RTP is to develop a transportation system that provides adequate levels of mobility to a growing region while recognizing the financial and environmental constraints associated with that system. The remainder of this section: 1) presents the systemwide goals and objectives of the Plan; 2) defines adequate mobility and the types of fiscal and environmental constraints that must be addressed; and 3) details the criteria against which the performance of the system will be measured.

Goal #1: TO PROVIDE ADEQUATE LEVELS OF MOBILITY ON THE TRANSPORTATION SYSTEM.

1. Objective: To maintain accessibility to jobs for residents of the region.

   Performance Criterion: The number of job opportunities available within 30 minutes from major residential sectors by the fastest mode during peak hours should be equal to or greater than today.

2. Objective: To provide a public transit system which maintains accessibility to jobs for the transportation disadvantaged.

   Performance Criterion: The number of jobs accessible by transit within 30 minutes from those subareas having a higher than average concentration of transportation disadvantaged persons should be greater than today.

3. Objective: To maintain accessibility to shopping opportunities for residents of the region.

   Performance Criterion: The percent of total regional population having access to a regional shopping area within 15 minutes by fastest mode during off-peak hours should be equal to or greater than today.

4. Objective: To maintain accessibility to markets for major shopping center investments.

   Performance Criterion: The population within 15 minutes travel time of selected major regional shopping locations, by fastest mode during off-peak hours, should be equal to or greater than today.

5. Objective: To maintain accessibility to major freight distribution centers.

   Performance Criterion: The off-peak travel time from major freight distribution centers to the nearest freeway interchange using a route compatible with surrounding land uses should be equal to or faster than today.

Goal #2: TO PROVIDE ADEQUATE MOBILITY AT A REASONABLE TOTAL COST.

1. Objective: To minimize the total cost associated with the transportation system including cost of improvements and cost for operation and maintenance of the system.

Goal #3: TO PROVIDE ADEQUATE MOBILITY WITH MINIMAL ENVIRONMENTAL IMPACT AND ENERGY CONSUMPTION.

1. Objective: To reduce transportation-related energy consumption to at least 1980 levels through improved auto efficiencies and increased use of transit, carpools, vanpools, bicycles and walking.

   Performance Criterion: The energy efficiency of the plan shall be determined by estimating year 2000 daily transportation-related energy consumption in equivalent barrels of oil (combines gasoline, diesel and electricity).

2. Objective: To maintain the region's air quality.

   Performance Criteria: Hydrocarbon emissions by transportation-related sources, in combination with stationary source emissions, should not result in the Federal ozone standard of .12 PPM (part per million) being exceeded.

   Transportation-related emissions per day of TSP (Total Suspended Particulates), in combination with stationary

sources should not result in the Federal standard being exceeded.

3. Objective: To minimize disruption associated with capital improvement projects.

4. Objective: To remove through traffic from neighborhood streets which results from congestion on adjacent facilities.

D. TRANSPORTATION SYSTEM DESIGN

Additional public investments in the highway and transit system are needed to provide the region with an adequate level of mobility. However, demand management programs can be used to minimize peak period travel, thereby lessening the magnitude of the required public investment. This section specifies the quality of service expected on the highway and transit system and establishes "system design criteria" by which the various components of the system must be delineated (i.e., where major arterials and regional transit trunk routes should be located). In addition, this section establishes a policy direction for demand management programs to support the highway and transit objectives. This section does not prescribe standard capacities for each type of highway facility or transit service. These decisions are based upon forecasts of traffic volumes and transit ridership and a policy determination on tolerable levels of traffic congestion and transit crowding.

Highway Objectives and Performance Criteria

1. Objective: To maintain a system of principal routes for long distance, high speed, statewide travel.

   Performance Criterion: The off-peak travel time for statewide trips within the region, from each entry point into the region to each exit point should be equal to or faster than today and the off-peak travel time for statewide trips within the region from each entry point to the I-405 loop should be equal to or faster than today.

2. Objective: To maintain a reasonable level of speed on the region's freeways during the peak hours.

   Performance Criterion: A peak-hour speed no slower than 35-40 mph during the morning and evening 90-minute peak periods (equivalent to the maximum service volume at level-of-service "D").

3. Objective: To maintain a reasonable level of speed on the region's freeways during the off-peak periods.

Performance Criterion: A peak-hour speed of no slower than 45-50 mph during the highest volume typical mid-day hour (equivalent to level-of-service "C").

4. Objective: To maintain a reasonable level of speed on principal and arterial routes during the peak-hour.

   Performance Criteria: Peak-hour average signal delay should be not longer than 40 seconds during the peak 20 minutes (equivalent to level-of-service "E") and no longer than an average of 35 seconds (level-of-service "D") during the balance of the morning and evening 90-minute peak.

5. Objective: To maintain a reasonable level of speed on principal and arterial routes during the off-peak periods.

   Performance Criterion: Average signal delay during the off-peak periods should be no longer than 25 seconds during the highest volume typical mid-day hour (equivalent to level-of-service "C").

Highway Functional Classification Criteria

Metro's adopted functional classification system establishes the Major Arterials and Principal Routes and serves as the framework for endorsement of the local jurisdictions. The Minor Arterial and Collector systems identified by Metro's adoption of a Minor Arterial and Collector system is dependent upon:

- the adequacy of the system to serve land use patterns defined in the affected local comprehensive plan(s) to ensure Minor Arterial and Colletor traffic does not overburden the Major Arterials and Principal Routes; and
- consistency of the system with the functional classification system identified in the affected jurisdictions' comprehensive plans.

Metro's adopted functional classification system within the urban area will consist of the Principal and Major Arterial routes designated in this Plan (Figure 4-1, page 4-6) plus the Minor Arterials, Collectors, and streets designated for transit service to be derived from the adopted local comprehensive plans. This will constitute the Federal-Aid Urban system and, as such, will provide the basis for federal funding eligibility.

1. Principal Routes - This system provides the backbone for the roadway network. It serves through trips entering and leaving the urban area, as well as the majority of movements bypassing the central city. This system includes interstates, freeways, expressways and other principal arterials.

System Design Criteria

- An integrated system which is continuous throughout the urbanized area and also provides for statewide continuity of the rural arterial system.
- A principal arterial or freeway route should provide direct service 1) from each entry point to each exit point or 2) from each entry point to the I-405 loop (i.e., downtown). If more than one road is available, the most direct will be designated as the principal unless through traffic is incompatible with surrounding properties. Off-peak travel times should not be significantly increased through use of indirect routes.
- Freeways should be grade separated and other principal routes should provide a minimum of direct property access (driveways) to avoid conflicts between higher speed through travel and local access movements. Existing and proposed driveways should be consolidated on access frontage roads or side streets to the greatest extent possible.
- The principal route system inside the I-205/Hwy. 217 loop should be upgraded to freeway standards where feasible, with the exception of the McLoughlin Boulevard and I-505 Alternative routes, where adjacent land uses are not compatible with this treatment.
- In general, freeways should not connect to collectors or local streets.
- The principal system should serve the major centers of activity (trip generators), the highest traffic volume corridors and the longest trip desires.
- No restrictions on truck traffic.

2. Major Arterials - These facilities are the supporting elements of both the principal routes and collector systems. Major arterials, in combination with principal routes, are intended to provide a high level of mobility for travel within the region. All trips from one subarea through an adjacent subarea traveling to other points in the region should occur on a major arterial or principal route. Access to major port facilities should be provided by major arterials.

System Design Criteria

- Linkage with principal arterials, collectors and other major arterials.
- Land access should be restricted to major traffic generators to the greatest extent possible; minor driveways should be consolidated on access frontage roads or side streets.

- Signalized intersections should maintain high capacity for the major arterial with grade separations as needed.
- A major arterial or principal route should provide direct service from one subarea through another to reach the next subarea. If more than one route is available, the more direct route will be designated unless through traffic is incompatible with surrounding properties. Peak travel times should not be significantly increased through use of indirect routes.
- Truck route.
- The principal routes and major arterial systems in total should comprise 5-10 percent of the total mileage and carry 40-65 percent of the total vehicle miles traveled.

3. Minor Arterials - The minor arterial system complements and supports the principal and major systems, but is primarily oriented toward travel within and between adjacent subareas. An adequate minor arterial system is needed to ensure that these movements do not occur on principal routes or major arterials. These facilities provide connections to major activity centers and provide access from the principal and major arterial systems into each subarea.

System Design Criteria

- Any land access should be oriented to public streets and major traffic generators; access to single family dwellings should be discouraged.
- Minor arterials should generally not be continuous across two or more subareas.
- Linkage with collectors and major arterials.
- The full freeway and arterial system (principal, major and minor) should comprise 15 - 25 percent of the total mileage and carry 65 - 80 percent of the total vehicle miles traveled.

4. Collectors - The collector system is deployed nearly entirely within subregions to provide mobility between communities and neighborhoods or from neighborhoods to the minor and major arterial systems. An adequate collector system is needed to ensure these movements do not occur on principal routes or major arterials. Land is directly accessible with emphasis on collection and distribution of trips within an arterial grid.

System Design Criteria

- System access to minor and major arterials and other collectors, as well as local streets.

- Intersections with collectors and above consist of stop sign control and some signalization.
- Parking is generally unrestricted.
- Access should generally not be provided to freeways and principal arterials.
- The collector system should comprise 5-10 percent of the total mileage and carry 5-10 percent of the total vehicle miles traveled.

5. Local Streets - The local street system is used throughout developed areas to provide for local circulation and direct land access. It provides mobility within neighborhoods and other homogeneous land uses, and comprises the largest percentage of total street mileage. In general, local traffic should not occur on Major Arterials and Principal Routes.

System Design Criteria

- Linkage to collectors and other local streets.
- Usually unrestricted parking.
- Trips are short and at low speeds.
- Service is almost exclusively direct property access.
- Access should not be provided to freeways and generally not to major arterials.
- Local streets should comprise 65-80 percent of the total mileage and carry 10-30 percent of the total vehicle miles traveled.

Transit Service Objectives and Performance Criteria

Transit service objectives and criteria are established to define the extent to which transit service will be provided, the convenience with which travel can be accomplished by transit and the cost of traveling by transit. In addition, similar to highway functional classification criteria, criteria are established for different types of routes according to the type of travel served. In general, the transit system should be designed to be a competitive and viable alternative to the automobile. It should be designed to serve a wide variety of trip destinations, purposes and times of day. In particular, the system should more effectively serve travel needs beyond 1) peak-hour travel to downtown Portland, and 2) work trips in general. The overall system concept that will be provided calls for a system of trunk routes providing direct, high quality service between major activity centers with connections to neighborhood areas by feeder, crosstown and local routes. In areas with sufficient density, the service will be provided through a grid system. In areas with lower density, the service will be provided through establishment of timed-transfer stations providing a focus for transfer between a large number of local routes and the trunk routes.

1. Objective: To provide transit service throughout the urbanized portions of the metropolitan area.

   Performance Criterion: The percent of the regional population residing within one-quarter mile of transit service should be equal to or greater than today.

2. Objective: To provide a quality of transit service that is reasonably comparable to alternative modes of travel.

   Performance Criterion: The travel time for each trip by transit should be no longer than twice the trip time by auto (peak and off-peak) including walk, wait and transfer time.

   Performance Criteria: Transit vehicles should be no more crowded than 3.5 standees per square meter averaged during the peak hour; during off-peak hours transit passengers will be predominantly seated an average of with no more than 1 standee per square meter. Applied to current and planned equipment, these criteria provide the following vehicle capacities:

| | | Average Hourly Standees | | | Average Hourly Total Capacity | | |
|---|---|---|---|---|---|---|---|
| | Seats | Off-Peak | Peak Hour | Crush | Off-Peak | Peak Hour | Crush |
| Standard Bus | 46 | 6 | 19 | 44 | 52 | 65 | 90 |
| Articulated Bus | 67 | 11 | 38 | 88 | 78 | 105 | 155 |
| Articulated Light Rail Vehicle | 76 | 22 | 19 | 180 | 98 | 155 | 256 |

Transit System Design Criteria

Metro's adopted transit system establishes the Regional Trunk Routes. Local comprehensive plans should recognize these routes and identify streets that are suitable for sub-regional trunk routes and/or local transit service.

1. Regional Trunk Routes - A regional trunk system will be provided to directly and conveniently serve long-distance trips from each major subarea through adjacent subareas to other parts of the region in each major travel corridor. The level of transit service provided on a regional trunk route is dependent upon the level of patronage demand in the corridor served. If demand is great enough it may be deemed necessary to construct a regional transitway (i.e., light rail or exclusive busway). The characteristics of regional trunk routes are described as follows:

   - Radial regional trunk routes will serve each major travel corridor connecting central Portland with suburban activity centers of regional significance. In addition to other purposes, these routes will be

expected to carry the increase in work trips to downtown Portland due to new development.

- Circumferential regional trunk routes will interconnect major suburban activity centers. These routes will be designed to provide access to major trip attractors without transfer through downtown Portland.
- Regional trunk routes should provide high-speed service. Preferential treatment for buses, limited stop service and/or express service during peak hours will be considered as needed to maintain a peak period transit travel time no longer than one and a half times uncongested highway travel time.
- Regional trunk routes should provide the following minimum service frequency to serve urban development:

| | |
|---|---|
| Peak | 10 minutes |
| Day Base | 15 minutes |
| Night | 20 minutes |
| Late Night | 30 minutes |
| Owl | 120 minutes |

2. Subregional Trunk Routes - These subregional transit routes should serve intermediate length trips within subareas to provide connection between major activity centers and from points within the subarea to nearby regional trunk routes and transit stations.

3. Transfers - Trunk and local routes should be designed with convenient transfer opportunities to allow travel between downtown Portland and all residential areas with no more than one transfer, between other major origins and destinations with no more than two transfers and within local areas with no more than one transfer.

4. Park and Ride - Park and ride lots should be established to provide convenient auto access to regional trunk route service for areas not directly served by transit.

5. Fare Rate Structure: The fare structure will meet the following objectives:

- Fares should keep pace with inflation.
- The amount of service (length of ride, speed, frequency) should be comparable to the fare collected.
- Special discounts should be provided to promote regular ridership and benefit low mobility groups.
- Innovative fare programs should be used to promote increased ridership, including special promotions, off-peak fares, special zones, etc.
- The fare collection system should be convenient for the user.

6. Regional Transitway Policies

Regional transitways (light-rail transit or exclusive busways) provide an attractive method of providing regional trunk route service. With a partially separated right-of-way and larger vehicles, greater capacity and higher speed service can be provided while concurrently minimizing operating cost. Regional transitways have additional benefits of providing efficient high-capacity service to high-density developments, thereby providing a logical tool for targeting locations for high-density developments. Regional transitways are, however, a very high cost public investment. As such, they are warranted in only the most heavily-traveled corridors if they are a cost-effective investment. In addition, transitways require acquisition of right-of-way that may otherwise be developed.

Due to the high cost of transitways and the length of time to implement such a facility, development of this region's transitway system will be pursued in an incremental fashion. The guidelines for implementation of the transitway system are as follows:

- Regional transitways will be considered for individual regional trunk route corridors as appropriate to economically provide required high speed and/or high capacity service.
- Potential transitway routes will be identified in each corridor as appropriate to ensure consistent phasing from bus trunk operation in public streets to transitway operation.
- Right-of-way will be protected from encroachment to the greatest extent feasible for each of the transitway routes.
- Detailed cost and environmental impact studies will be pursued in each corridor before implementation of a transitway to ensure the most cost-effective public investment is implemented.

Demand Management Program Objectives and Criteria

The purpose of demand management is to reduce the number of automobile and person trips being made during the peak travel periods throughout the region. The primary objectives of managing travel demand are to reduce the necessity of building new highways or adding lanes to existing highways and to optimize the use of transit service. Managing travel demand also helps the region meet its goals of reducing air pollution and conserving energy.

Presented here are objectives defining the most appropriate types of travel demand programs to pursue and guidelines on the application of these programs.

1. Objective: Minimize travel by single occupant automobile; maximize travel by alternate modes.

2. Objective: Minimize travel during peak hours.

3. Objective: Minimize trip length.

Program Design Criteria

1. Rideshare Programs - An attractive way to lessen peak period vehicle travel is to increase the percentage of commuters that rideshare. This serves to increase person-carrying capacity without increasing vehicle demand on the highways. Because of the relatively constant and repetitive nature, individuals can make shared ride arrangements of work trips in advance. Other trip purposes, such as shopping and recreational trips, have proven much less responsive to instituted rideshare programs and are, therefore, not addressed.

   Currently, approximately 23 percent of those traveling to work by auto rideshare in groups of two or more on any given day. A few large firms in the region with aggressive rideshare programs have upwards of 30 percent of their employees ridesharing. Looking at the rideshare goals of some large firms in the region and at experiences in other cities, a regional objective of 35 percent of all individuals traveling to work by auto in the rideshare mode appears reasonable and achievable by the year 2000. If this goal is met, there would be a nine percent reduction in auto work trips in the year 2000 from what would be expected using the 1980 rideshare rate and an accompanying reduction in vehicle travel of 538,000 miles per day. This shift to ridesharing represents 16 percent fewer persons driving to work alone and 50 percent more persons traveling to work in carpools or vanpools.

   Local jurisdictions are encouraged to adopt policies consistant with the overall guidelines for implementation of the 35 percent rideshare goal, such as:

   - Concentrate rideshare efforts on work trips to large employers or employment centers and in congested traffic corridors.
   - Encourage ridesharing through incentives (such as preferential parking locations and price and preferential traffic lanes) and through marketing programs to advertise the benefits of ridesharing and to increase the convenience of ridesharing.

2. Parking Management - The mode of travel used to make a trip is directly influenced by the convenience and cost of parking. As parking in densely developed areas becomes less convenient and more costly, alternative modes of

travel become more attractive. In addition, as alternative modes of travel are increasingly used for work trips, scarce parking spaces are released for shopping trips. Parking management is particularly important in areas that are currently developed at high densities and in areas planned for new high density development. Parking management programs can be targeted at increasing both ridesharing and transit use depending upon the circumstances. The overall guidelines for implementation of parking management programs are as follows:

- Local jurisdictions are encouraged to limit the number of parking spaces in high density areas with direct service to regional transit trunk routes. The limit should be based upon the type and density of development and can be accomplished through a parking management program covering a general area or specific parking requirements for individual developments.
- Local jurisdictions are encouraged to manage the price and location of parking to favor the rideshare and transit traveler and shopping trips rather than work trips by single-occupant autos.
- Park-and-pool lots should be provided to aid in formation of carpools.

3. Land Use - Local comprehensive plans guide new development and provide the means to ensure that future development and future transportation investments are compatible. Local plans which provide for increased suburban employment, together with the adopted Urban Growth Boundary (UGB), ensure a greater mix of land uses, thereby minimizing trip length. Local plans specifying locations for high density developments should seek to complement planned regional transit trunk routes and transit stations.

   Local jurisdictions are encouraged to initiate the following land use actions to support demand management programs:

   - New development should achieve a balance of employment, shopping and housing to reduce the need for long trips and to make bicycle and pedestrian travel more attractive.
   - Employment opportunities should be developed throughout the metropolitan area in both urban and suburban locations. This development should be concentrated and located to maximize the feasibility of being served by transit or located along regional transit trunk routes. Employment, commercial and residential densities should be maximized around planned transit stations and regional transit trunk route stops compatinle with other local objectives. Compatible increase in density should also be

considered along sub-regional and local transit routes.

- Pedestrian movements should be encouraged within major activity centers by clustering hotel, entertainment, residential, retail and office services to utilize common parking areas.
- Land development patterns, site standards and densities which make transit, bicycle and pedestrian travel more attractive should be promoted.
- Local jurisdictions should seek to improve the streetside environment affecting the transit user, bicyclist and pedestrian.

4. Flextime/Staggered Work Hours/Four-Day Work Week - Flexible work schedules imply individual choice as to when an employee begins and ends his work day. This is an important travel demand measure, as several studies have found that existing transportation systems would function more effectively if workers were given more latitude in the design of their commute trip. Flextime programs would also help Tri-Met, because spreading peak transit ridership over a longer time period would result in a need for fewer buses and drivers, while providing more seats for riders during the peak period. Flexible work schedules and the associated reduction in peak hour travel lessen the need for both transit and highway capacity. Guidelines for implementation of flexible work schedules which local jurisdictions are encouraged to support are as follows:

   - Flexible work schedules are encouraged at all places of employment where such programs would not interfere with the productivity or effectiveness of the employee.
   - Flexible work schedules are particularly encouraged at large employment centers, in central business districts and in areas experiencing traffic and circulation problems.

5. Bicycling - The adoption of the Regional Bicycle Plan element of the RTP signifies the region's recognition of bicycling as a legitimate form of transportation. In Portland, for example, bicycle commuting has doubled in volume since 1974, and now accounts for two to four percent of all work trips--more than double the national average. The implementation of the bicycle plan element will provide safe and convenient routes for existing bicyclists between jurisdictions and to major attractions throughout the region and encourage more bicycle use. In addition to the provision of safe bike routes, guidelines for increasing the use of bicycles as an alternative mode of transportation which local jurisdictions are encouraged to support are as follows:

- Long-term bicycle parking facilities should be provided at employment centers, transit stations, park and ride lots, schools and multi-family dwellings.
- Short-term bicycle parking facilities should be provided at shopping centers, libraries, recreation areas and post offices, among others.
- Local voluntary bicycle marking programs should be initiated to deter theft and aid in returning stolen bicycles to their owners. The licensing of bicycle operators in not recommended for the region.
- Police programs for consistent enforcement of all rules of the road pertaining to bicyclists should be supported.
- The development of guidelines and programs for safety education and awareness should be encouraged.

While demand management measures are useful because of their potential to provide relatively low-cost solutions to regionwide problems, they are particularly attractive because of their potential to help solve localized or corridor-oriented problems. For example, a rideshare program can be oriented toward a specific corridor with congestion problems; a flextime program can be targeted at a central business district or a major employment center where traffic demands are concentrated.

An important consideration involving demand management measures is to combine those that are mutually supportive. While one measure may be somewhat effective on its own, it may be much more successful in conjunction with another measure. For example, an employer program to increase ridesharing may be moderately effective; the same program coupled with a reduced carpool parking fee program may be very effective. Similarly, land use policies can be formulated which, on their own, may have little impact on reducing vehicle trips, but in concert with other actions can be very successful in promoting the use of transit, or bicycle and pedestrian travel. Therefore, local jurisdictions are urged to examine demand management measures as a whole and implement those combinations of measures which will best satisfy local needs.

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capacity are maintained on this system within given financial and environmental constraints. Regionwide efforts include a number of improvements to balance the capacity of the regional highway system, significant increases in the quality, quantity and connectivity of the transit system, and a major emphasis on areawide demand management programs to reduce the number of vehicle trips, especially during the peak hour.

The transportation capacity required in each of the major radial travel corridors is provided through a balanced combination of:

- a freeway or principal arterial highway route and supportive major arterials;
- a regional transit trunk route and the necessary feeder route system; and
- demand management techniques and programs in the corridor itself and/or at the major destination zones.

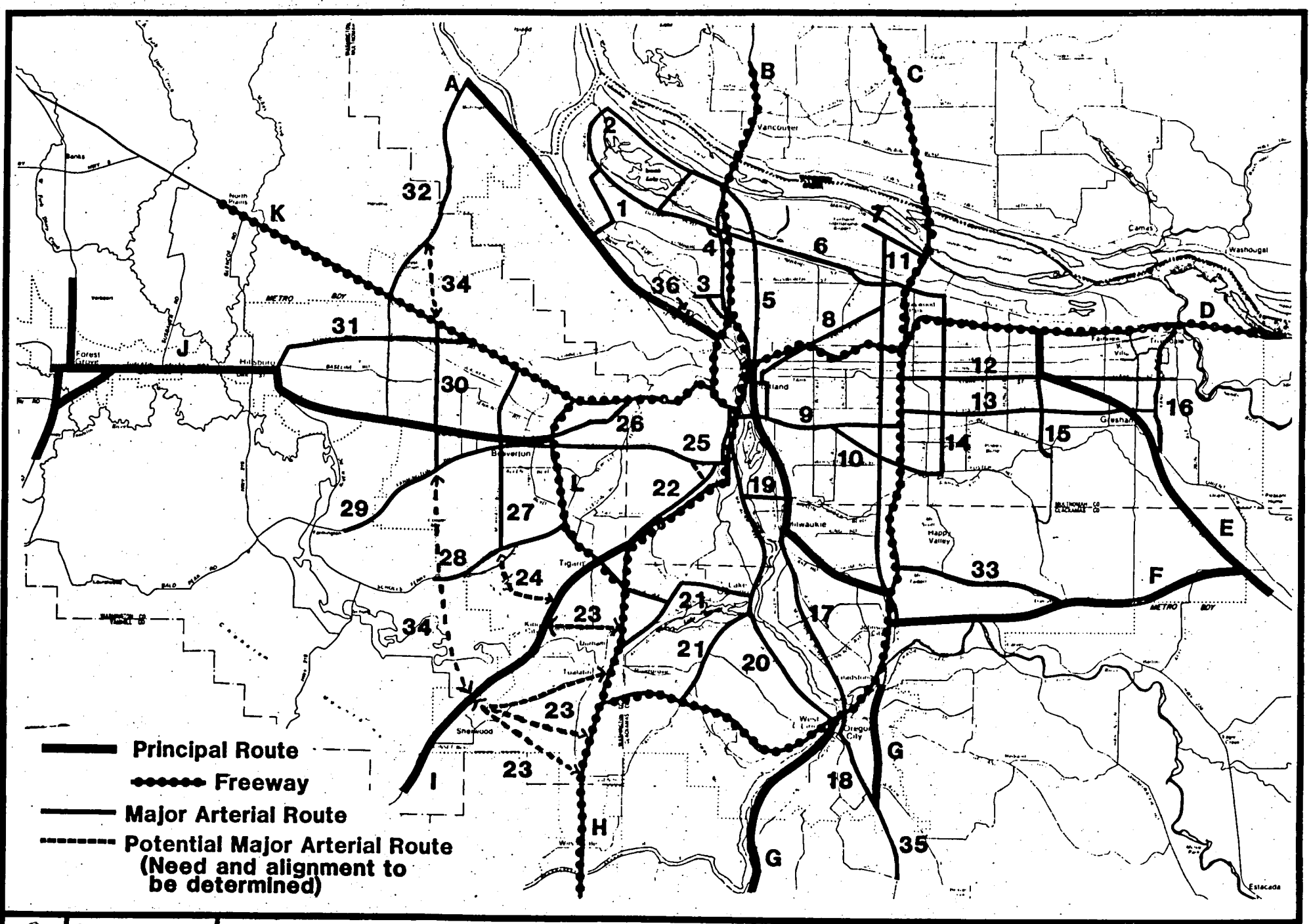
Regional transit trunk route service in the circumferential corridors will improve the convenience of suburban subarea-to-subarea transit travel and eliminate the need to travel through the downtown sector.

In the suburban subareas, an urban highway infrastructure is provided, with transit service increases to concentrated employment areas. In the close-in subareas, transit service improvements will provide improved connectivity, greater coverage and more convenient access to a wider variety of destinations. A grid system and transit transfer project will be instituted in the older, more densely developed areas of the City of Portland. Timed-transfer service and transit centers will be provided in the less densely developed areas.

1. The Regional Highway System

   The regional highway system (Figure 4-1) depicts the location of the major highway facilities planned for the region up to and beyond the year 2000. This system defines the framework within which the facility improvements, land use design activities and rights-of-way protection recommended in the Plan will be used to increase the effectiveness of the highway element of the regional transportation system. Significant features of the long-range highway system include:

   - freeways radiating from an inner freeway loop through the Northern, Southwestern, Eastern and Western travel corridors;
   - beltways connecting these freeway routes through the suburban areas and bypassing the downtown core;
   - principal arterial routes in the Southern and Northwestern corridors; and
   - a supportive feeder system of major arterial routes throughout the region.




Regional Transportation Plan

# PRINCIPAL ROUTES & MAJOR ARTERIALS

FIG. 4-1

TABLE 4-1

PRINCIPAL ARTERIAL SYSTEM

Overall Function: Carry Statewide Traffic and Cross-Regional Traffic

| | Route | Principal Arterial Function |
|---|---|---|
| A. | Yeon Avenue/St. Helens Road | Carry trips to and from Scappoose/Astoria. |
| B. | I-5 North | Carry trips to and from Seattle. |
| C. | I-205 | Carry trips from Seattle to Salem through the region, carry trips from I-5 to I-84, US 26 (Multnomah County), 99E (Clackamas County) and Highway 213. |
| D. | I-84 | Carry trips to and from the Columbia Gorge. |
| E. | US 26/Burnside/181st | Carry trips from Central Oregon and Sandy/Mt. Hood to I-405, I-5 North and I205 via I-84 and to I-84 and the Columbia Gorge. |
| F. | Highway 212 (East of I-205) | Carry trips from Central Oregon and Sandy/Mt. Hood to I-5 South and Highway 99E via I-205 and to Tigard, Beaverton and Hillsboro via Highway 217. |
| G. | Oregon City Bypass and 99E/I-205/ Highway 224/McLoughlin Blvd. | Carry trips from rural Clackamas County to I-405 via 99E and Oregon City Bypass to I-205, Highway 224 and McLoughlin Blvd. |
| H. | I-5 South | Carry trips to and from Salem. |
| I. | Highway 99W (Southwest of I-5) | Carry trips to and from the Willamette Valley and the central Oregon Coast. |
| J. | T.V. Highway (west of Highway 217) | Carry trips to and from Forest Grove. |
| K. | Sunset Highway | Carry trips to and from the Oregon Coast. |
| L. | Highway 217 | Carry trips between the Sunset Highway, T.V. Highway, 99W and I-5 South. |



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Table 4-2

MAJOR ARTERIAL SYSTEM

Overall Function: Carry Regional Traffic From One Subarea Through an Adjacent Subarea to Points Beyond

| Route | Major Arterial Function | COMMENTS AND OUTSTANDING ISSUES |
|---|---|---|
| 1. Argyle Way/Columbia Blvd./St. Johns Bridge | Carry traffic from I-5 and Northeast to Rivergate and Northwest. | Note: Dependent on Columbia Blvd. providing faster connection between St. Helens Bridge and I-5. |
| 2. Marine Drive | Carry traffic from I-5 to Rivergate. | |
| 3. Going Street/Greeley Avenue | Carry traffic from I-5 to Swan Island. | Note: Dependent on new I-5 ramps to Greeley Avenue. |
| 4. Interstate/Denver Avenue | Carry traffic from North Portland to CBD and Jantzen Beach. | |
| 5. Union Avenue | Carry traffic from N.E. Portland to CBD and Jantzen Beach. | |
| 6. Lombard/Columbia | Carry traffic from I-5 and I-205 to industrial areas. | Note: Dependent on Lombard connection to Columbia at 60th. |
| 7. Airport Way | Carry traffic to Portland International Airport. | |
| 8. Sandy Blvd. | Carry traffic from N.E. Portland to CBD. | Note: Traffic from Maywood Park area to CBD expected to use the Banfield freeway. |
| 9. Powell Blvd. (via Morrison Bridge and Ross Island Bridge) | Carry traffic from S.E. Portland to CBD, I-5 South, Macadam and McLoughlin. | Note: Traffic from East Multnomah County to CBD expected to use I-205 and the Banfield freeway. |
| 10. Foster Road | Carry traffic from Powell Butte, to Happy Valley and rural Clackamas and Multnomah Counties to I-205 and S.E. Portland. | |
| 11. 82nd Avenue | Carry traffic from N.E. and S.E. Portland to 82nd Avenue shopping areas. | |
| 12. Stark Street<br>13. Division Street | Carry traffic from I-205 to Gresham. | |
| 14. 122nd Avenue<br>15. 182nd Avenue<br>16. 257th Avenue | Carry traffic through East Multnomah County and Gresham to I-84. | |



4076B/279-6
8/24/83

Table 4-2 (Continued)

MAJOR ARTERIAL SYSTEM

Overall Function: Carry Regional Traffic From One Subarea Through an Adjacent Subarea to Points Beyond

| Route | Major Arterial Function | COMMENTS AND OUTSTANDING ISSUES |
|---|---|---|
| 17. McLoughlin Blvd. (I-205 to Hwy. 224) | Carry traffic between Oregon City, Oak Grove, Gladstone and Milwaukie. | |
| 18. Molalla Avenue | Carry traffic from Highway 43 (West Linn) and McLoughlin Blvd. to Highway 213. | |
| 19. Sellwood Bridge/Tacoma | Carry traffic from S.W. Portland/ Lake Oswego to S.E. Portland/Milwaukie. | |
| 20. Macadam Avenue | Carry traffic from Lake Oswego/West Linn to CBD. | |
| 21. Kruse Way/Country Club Road/ Lower Boones Ferry Road/ Stafford Road | Carry traffic from I-5 and points west and I-205 and points south to Lake Oswego. | |
| 22. Barbur Blvd. | Carry traffic from S.W. Portland to CBD. | |
| 23. Durham Road or Edy Road/ Tualatin-Sherwood Road or Norwood Expressway or Stafford Extension | Possible major arterial from 99W/Sherwood to I-5 to reduce traffic on 99W through Tigard. | |
| 24. Murray Blvd. Extension | Possible major arterial from 99W/Tigard/Sherwood to Beaverton to reduce traffic on 99W through Tigard. | |
| 25. Beaverton-Hillsdale Highway | Carry traffic from S.W. Portland to Barbur Blvd. and between S.W. Portland and Beaverton; possible rerouting via Bertha with connection to I-5. | Note: Traffic from T.V. Hwy. in Beaverton to Portland to take Canyon Rd. or Hwy. 217 to access Sunset depending upon capacity analysis, traffic from south Beaverton to Portland expected to take Hwy. 217 and Sunset Hwy. rather than Beaverton-Hillsdale Hwy. or Scholls Ferry Rd. |
| 26. Canyon Road (Hwy. 217 to Sunset Hwy.) | Carry traffic from Beaverton to CBD | |
| 27. Murray Blvd. | Carry through traffic around Beaverton. | |
| 28. Scholls Ferry Road (west of Highway 217) | Carry through traffic around Beaverton; carry rural Washington County traffic to Highway 217. | |
| 29. Farmington Road | Carry traffic from south Farmington area to Highway 217. | |



4076B/279-7
8/24/83

Table 4-2 (Continued)

MAJOR ARTERIAL SYSTEM

Overall Function: Carry Regional Traffic From One Subarea Through an Adjacent Subarea to Points Beyond

| Route | Major Arterial Function | COMMENTS AND OUTSTANDING ISSUES |
|---|---|---|
| 30. 185th Avenue | Carry traffic from Aloha/Farmington/ T.V. Highway to Sunset Highway; carry traffic from north of the Sunset Highway to T.V. Highway. | |
| 31. Cornell Road | Carry traffic between Hillsboro and Sunset Highway | |
| 32. Cornelius Pass Road | Carry Washington County traffic leaving the region towards Scappoose; carry Washington County farm truck traffic to port facilities. | |
| 33. Sunnyside Road | Carry North Clackamas County rural and urban traffic to I-205. | |
| 34. Aloha Bypass | Possible major arterial connection from Hwy. 99W to Sunset and St. Helens Road | Northern leg from Sunset to Cornelius Pass via 185th would replace Cornelius Pass from 185th to Sunset. |
| 35. Highway 213 | Carry rural Clackamas County traffic to Oregon City Bypass and Mollala Avenue. | |
| 36. Yeon Overcrossing | Carry N.W. Industrial District traffic to Yeon Avenue/St. Helens Road. | |

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Specific details of each principal and major arterial facility are described in Tables 4-1 and 4-2.

2. The Regional Transit System

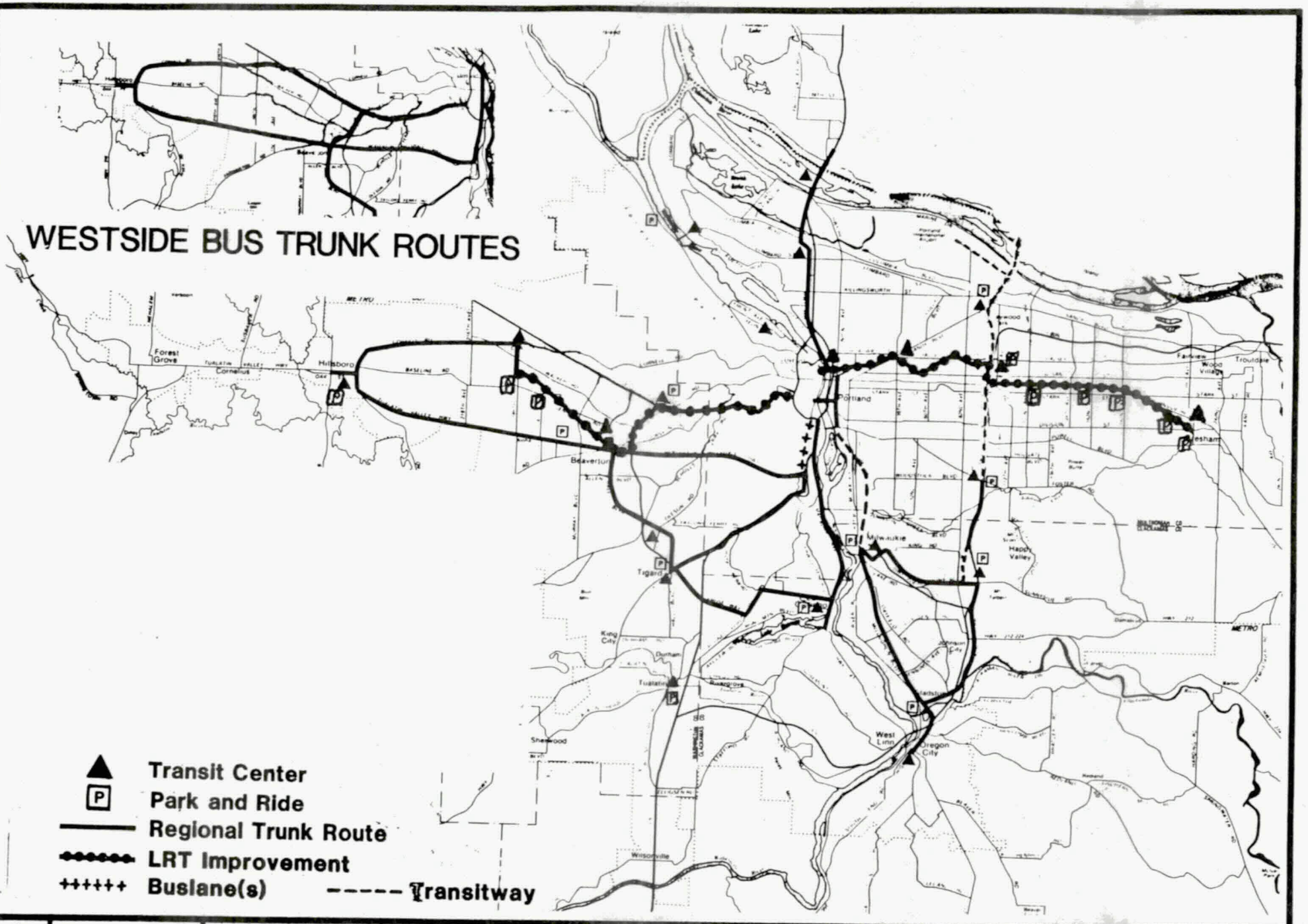
The adopted Plan emphasizes improved transit service throughout the region. The transit component of the plan seeks to optimize use of the existing transit system, to provide more convenient service between more locations and to increase transit capacity. Compared to the existing transit system, the Plan recommends a 95 percent increase in peak-hour service (revenue hours of vehicle operation) and would result in a 230 percent increase in peak-hour transit ridership by the year 2000.

The overall transit system concept consists of a system of regional trunk routes providing direct, high quality service between major activity centers with convenient connections at transit centers to neighborhood areas by feeder, crosstown, and local routes.

As illustrated in Figure 4-2, each of the region's major travel corridors (with the exception of the Northwest) will be served by a major transit trunk route. These trunk routes provide the backbone of the transit system (much like freeways do for the highway system) and are intended to provide the highest quality service (i.e., speed, frequency) and carry the highest passenger volumes. The transportation capacity needs along the Northwest Corridor are more directly related to the movement of goods and services than the movement of large volumes of people.

As shown in Figure 4-3, connection of the regional trunk routes to neighborhood areas will be made at transit stations located at major activity centers. The transit centers will form the focus of the transit system and will be designed to provide convenient transfers to feeder and local routes serving communities around the transit centers as well as providing the connection to additional crosstown transit routes. Transit vehicles on routes converging at the transit centers will also provide timed-transfer opportunities between routes with a minimum waiting time.

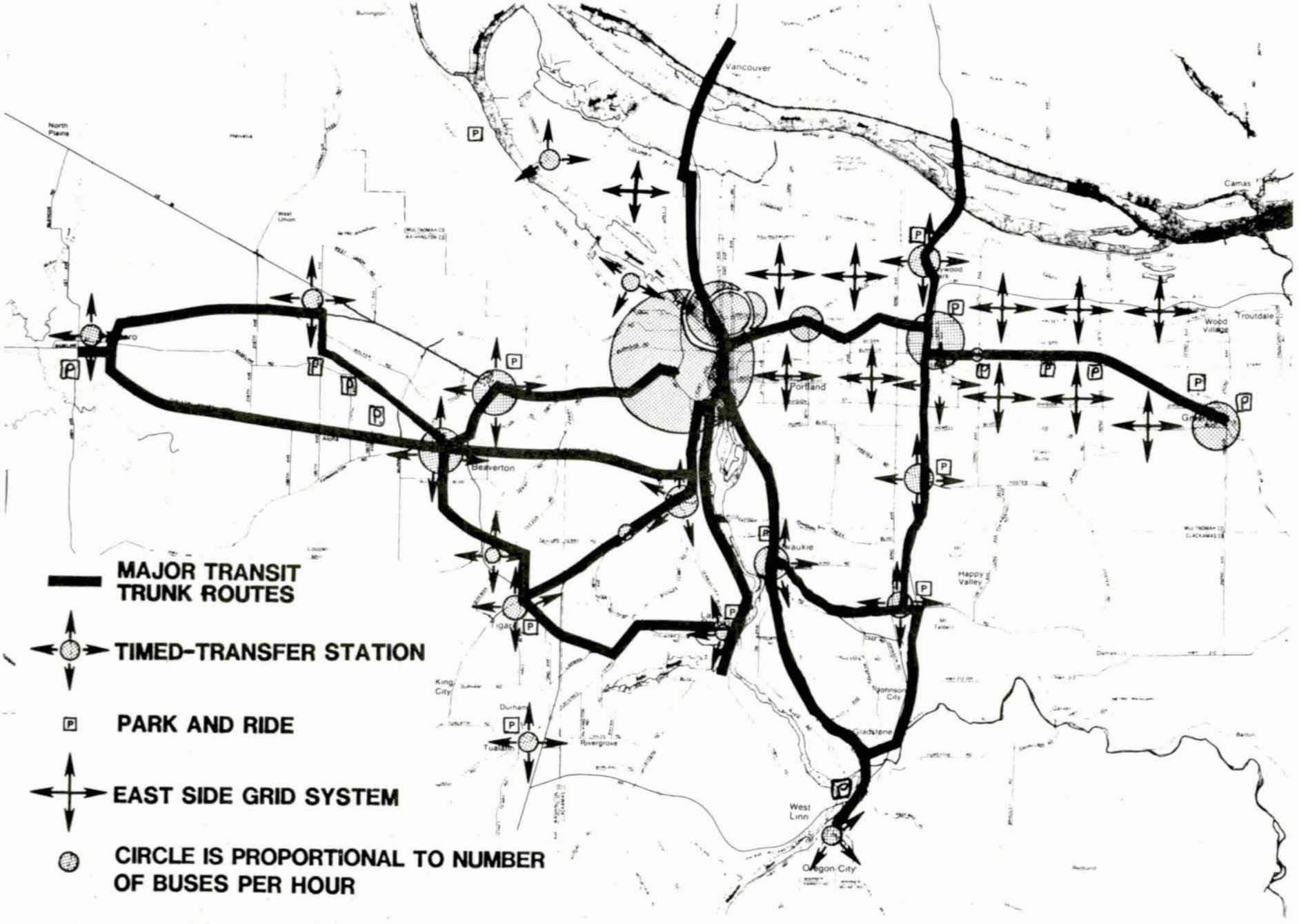
Another facet of the transit system proposed in the adopted Plan is service to local areas composed of feeder, crosstown and local routes. In areas of higher density (such as the Eastside of the City of Portland), this service will be provided through a grid system and transit transfer projects. In areas of lower density, timed-transfer opportunities will be provided. This localized network will ensure improved transit connectivity and provide the opportunity for transit




Regional Transportation Plan

# REGIONAL TRANSIT TRUNK ROUTES

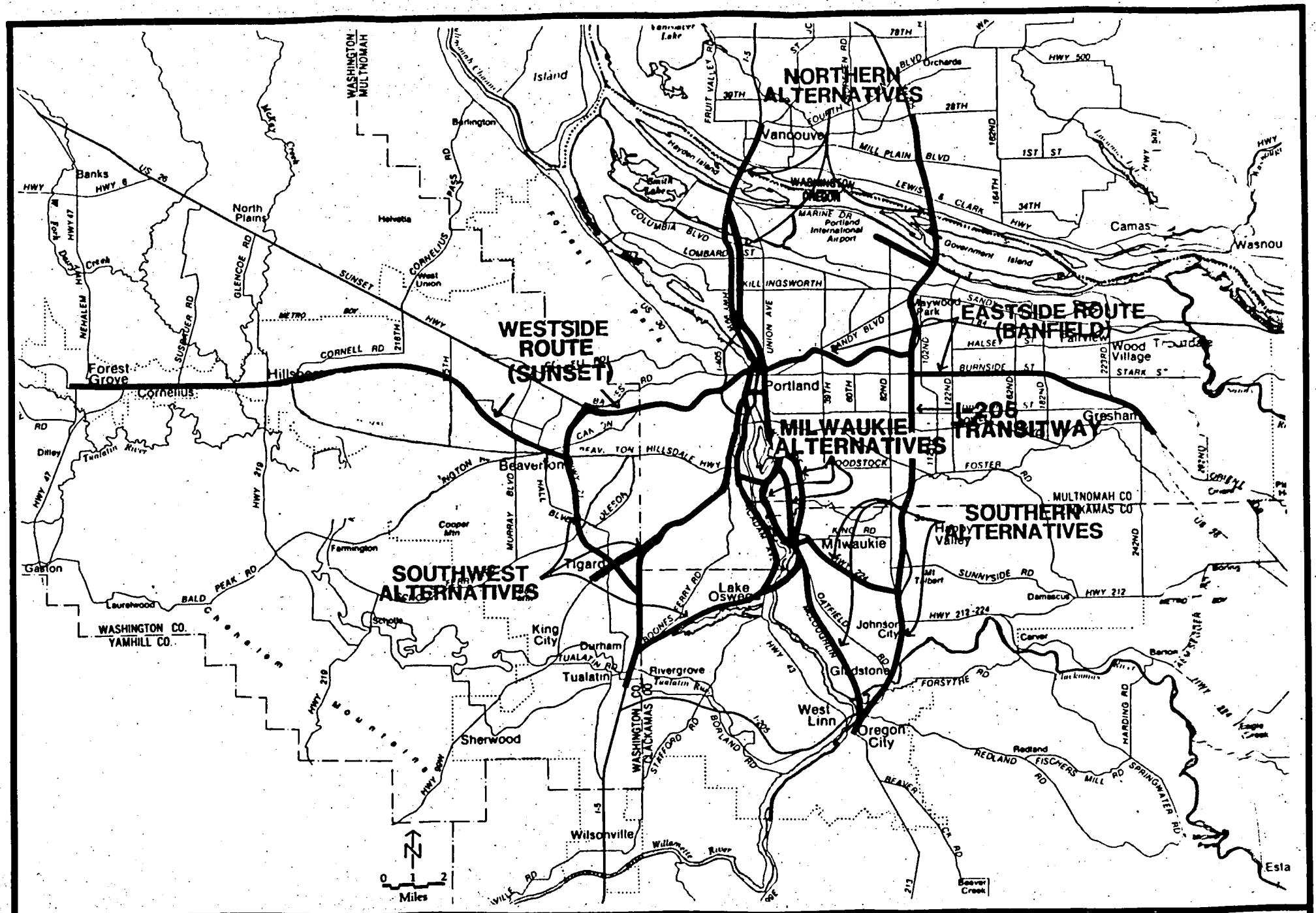
FIG. 4-2




METRO | Regional Transportation Plan

# RECOMMENDED TRANSIT SYSTEM CONCEPT

FIG. 4-3




Regional Transportation Plan

# LONG RANGE REGIONAL TRANSITWAY SYSTEM

FIG. 4-4

travel to a wider variety of destinations throughout the region.

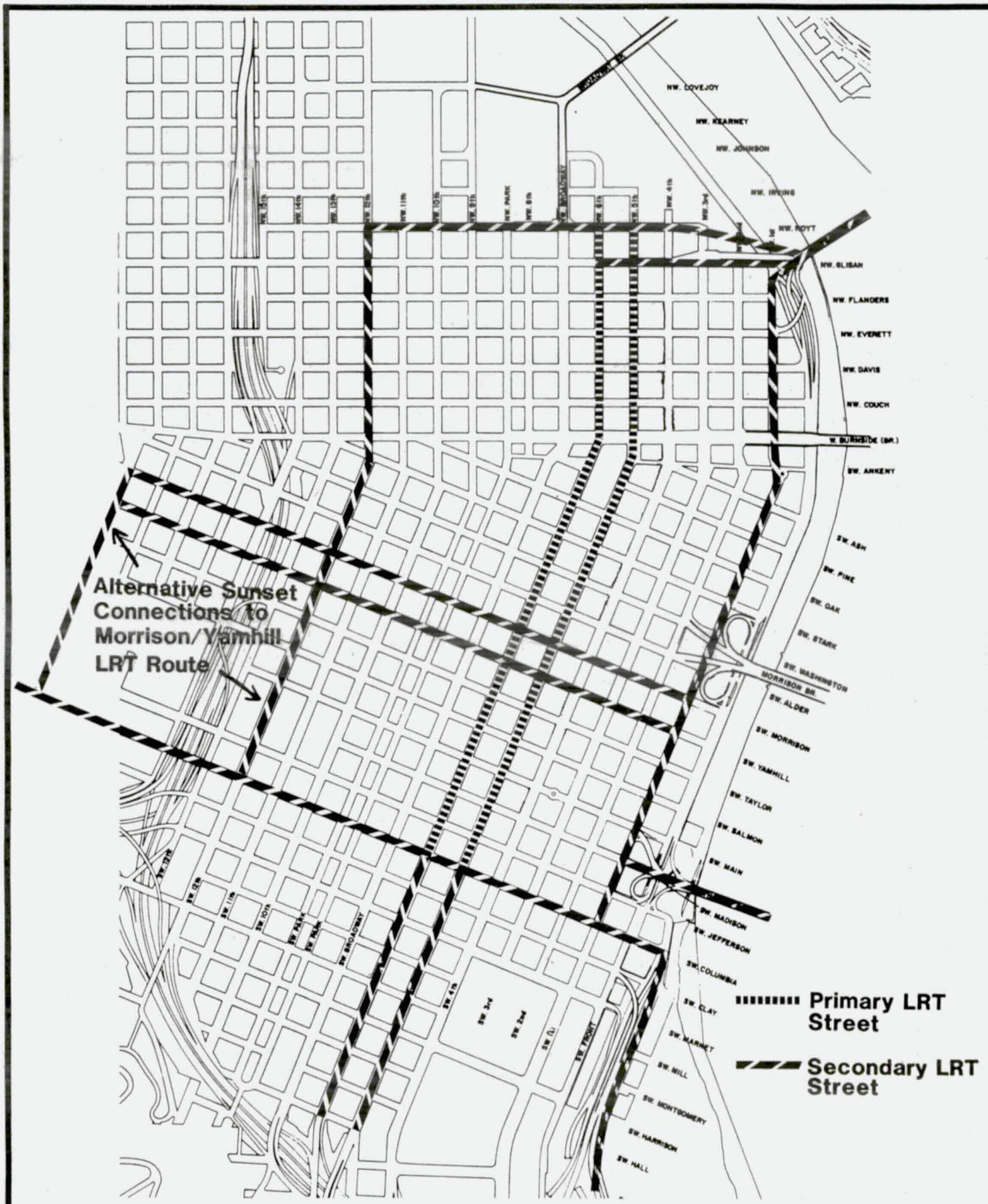
Special transportation for the elderly and handicapped and community transit services with or without connections to regular fixed route service will be provided as an integral part of the overall transit system.

Transitways - The Long-Range Transit System

Regional transitways (light rail or exclusive busways) offer an attractive method for providing regional trunk route service on heavily traveled routes. Transitways, with an exclusive right-of-way and larger vehicles, provide greater capacity and higher speed service at a lower operating cost to the public than normal bus operations in mixed traffic. In addition, transitways have the additional benefit of promoting transit-supportive economic development around stations.

Figure 4-4 shows potential routes for regional transitways in each of the regional transit trunk route travel corridors. In the Eastern Corridor, the Banfield LRT connecting downtown Portland and Gresham is a committed project. Two alternative sub-corridor routings (I-5 and I-205) are available in the Northern Corridor, and right-of-way for a transitway has been included in the I-205 freeway project from Foster Road to Clark County, Washington. The Sunset LRT has been selected as the preferred alternative to connect downtown Portland and Beaverton. The LRT corridor west of Beaverton to Hillsboro would follow the 185th East/West Alignment. Southwestern corridor LRT route alternatives exist in the Highway 217, Highway 99W and Macadam subcorridors. In the Southern Corridor, possible LRT routes south of Milwaukie to Oregon City include the McLoughlin and Highway 224/I-205 subcorridors. North of Milwaukie, numerous routing alternatives are available.

Figure 4-5 illustrates the long-range LRT alignments developed for downtown Portland. Initial service for the Banfield LRT will be provided via the cross-mall alignment on Morrison and Yamhill streets. As additional capacity for that line is required, a mall alignment using 5th and 6th Avenues will be implemented. This north/south corridor would form the backbone of the downtown transit system, serving as the major mode of access to and through downtown. The secondary LRT streets would provide alternative LRT connections as additional LRT corridors are implemented and provide regional transit service to the South Waterfront, RX Zone, Historic Districts and other downtown destinations. As the mall reaches its transit capacity, bus routes currently using the mall will be rerouted to other streets consistent with the Downtown




METRO

Regional Transportation Plan

# DOWNTOWN PORTLAND LRT NETWORK CONCEPT

FIG. 4-5

Plan and the Downtown Parking and Circulation Policy (such as 1st and 2nd and 10th and 11th Avenues).

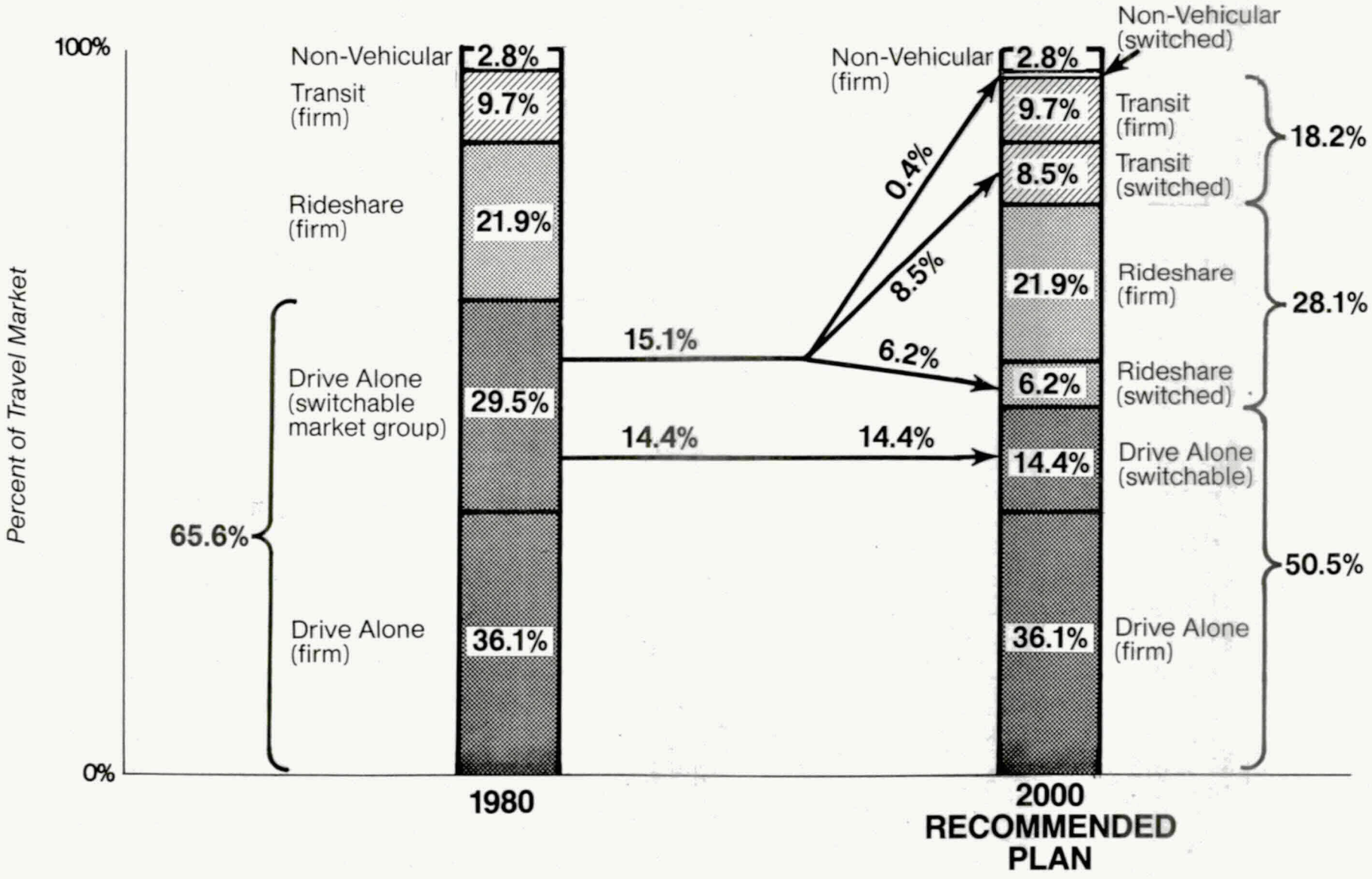
Transition

As the long-range transitway system is developed on a corridor by corridor basis, bus trunk route transit service will be provided in the remaining corridors by providing high-grade bus service on existing streets. In addition, the transit stations previously identified would also be compatible with the upgrading of service from a trunk route to a transitway. Although further study is needed in each corridor to determine the most cost-effective location and technology, steps should be taken now to protect rights-of-way from encroachment.

3. Demand Management Programs

The policy framework for demand management programs calls for an aggressive increase in ridesharing to 35 percent of auto work trips, parking programs in high density areas to encourage transit and ridesharing, development of land use patterns that are conducive to shorter trips and greater use of transit, flexible working hours, and encouragement of the use of bicycles as an alternative form of transportation. These programs are essential in the heavily traveled corridors and at concentrated employment centers. Implementation of these programs, however, must occur incrementally, as the need develops. New development occurs over time and, therefore, gradual implementation of higher densities and suburban employment concentrations will occur. Thus, parking and rideshare programs will be developed where they are needed to alleviate capacity limitations and flexible working schedules will develop gradually as individuals seek to avoid excessive travel delays during normal peak hours.

Identified in Chapter 5 are specific demand management programs that are in place or are committed for implementation. These programs, however, do not constitute the full extent of the demand management programs that will be needed by the year 2000 to meet the policy guidelines set out in Chapter 1. Additional programs will be developed to target particular problem areas and will be incorporated into the plan incrementally. Since the overall intent of demand management programs is to minimize the need for costly investments in highway facilities, these programs have been taken into consideration in forecasting travel demand and determining the quality of transportation service provided by the Adopted Transportation Plan. As such, the extent of highway and transit investments recommended in the plan take into consideration savings due to demand management programs. If the region fails to achieve the rideshare




Regional Transportation Plan

**MODAL SHARE MARKET DYNAMICS OF TRAVEL BETWEEN HOME & WORK** (PERCENT OF PERSON TRIPS PRODUCED IN OREGON)

**FIG. 4-6**

rate of 35 percent for work trips, for example, additional capital investments beyond those recommended in the Plan could be required. Presented here are the changes in travel demand that have been factored into the evaluation of the transportation plan and the types of programs that are recommended to be implemented incrementally when and where they are needed.

a. Rideshare

The performance of the highway system recommended in the Plan (Chapter 6) is based upon a forecast of traffic volumes that incorporate a 35 percent regionwide average rideshare rate for auto worktrips. In order to accurately reflect the manner in which ridesharing will be targeted to particular problem areas, the rideshare rate to different employment areas varies according to the likelihood for carpooling and vanpooling. The rate varies from as low as 0 percent ridesharing for very short trips destined to small, dispersed employment locations to as high as 45 percent carpooling plus five percent vanpooling for work trips that are longer than 12 miles destined to large employment concentrations.

The overall rideshare target established in the adopted Plan (a regionwide average of 35 percent of the auto worktrips) is considered both reasonable and achievable without mandatory controls. Currently, 65.6 percent of the total number of home to work person trips produced in the Oregon portion of the region are made in a single occupant automobile (Figure 4-6). Of these, surveys indicate 45 percent (29.5 percent of the total) show a responsiveness to rideshare and/or transit incentives and would consider switching away from their present drive-alone travel mode (Tri-Met's 1981 Attitudinal and Awareness Survey). Modal split simulations of the adopted Plan system indicate that about one-half of this group (15.1 percent of the total) will switch modes by the year 2000; nearly 60 percent of these to transit and non-vehicular modes (8.9 percent of the total) due to the significant increases in transit service called for in the Plan and the downtown parking policy, and about 40 percent (6.2 percent of the total) to ridesharing. Combined with the 21.9 percent of the total considered firm ridesharers, this results in 28 percent of the year 2000 total home to work market using the rideshare mode, constituting 36 percent of the automobile worktrips and achieving the rideshare target established in the Plan. Rideshare programs recommended to achieve these levels are as follows:

- better carpool matching services for carpoolers can be organized between multiple employers;
- additional priority lanes for carpoolers in selected areas;
- more employee benefits for ridesharing; and
- increased rideshare marketing information and park and pool lots in specific corridors.

b. Parking Programs

Parking programs which can provide preferential locations and prices for individuals that rideshare can be an important technique to achieve the 35 percent rideshare goal incorporated into the transportation plan and can be used to maximize transit ridership. The RTP forecast of travel demand to downtown Portland is consistent with the expected supply of parking in the downtown by the year 2000 as well as the emphasis on shifting the use of parking to short term trips.

Among the parking programs that should be considered by local jurisdictions are:

- provide preferential parking locations and prices for carpools and vanpools at public parking lots, curbside parking areas and in private employee parking lots;
- establish maximum parking requirements for new development within 1/4 mile of regional transit trunk route stops and transit stations according to the land use type and quality of transit service; and
- develop areawide parking management plans in existing and planned high density areas.

c. Land Use Decisions

The pattern of development is a major determinant of the travel demands that the Plan is expected to serve. Since the plan is focused on serving the travel demand associated with the development of local jurisdiction comprehensive plans, many of the transportation-related land use programs are taken into consideration. Local plans include a major expansion in suburban employment that is reflected in the travel flows described in the Plan, particularly in the major radial corridors. In addition, local plans call for specific locations of higher density development and a clear delineation of urban vs. rural development that is reflected in the design of the transit system and expected transit ridership.

Additional land use controls and incentives that jurisdictions should consider include:

- requirements dealing with parking, rideshare programs and curb cuts on arterials should be included in local land use regulations;
- greater densities could be focused around planned regional transit trunk route stops and transit stations and considered along sub-regional and local transit routes;
- mixed-use developments can be encouraged; and
- site plans can be designed to emphasize convenient pedestrian access to transit and local pedestrian and bicycle paths.

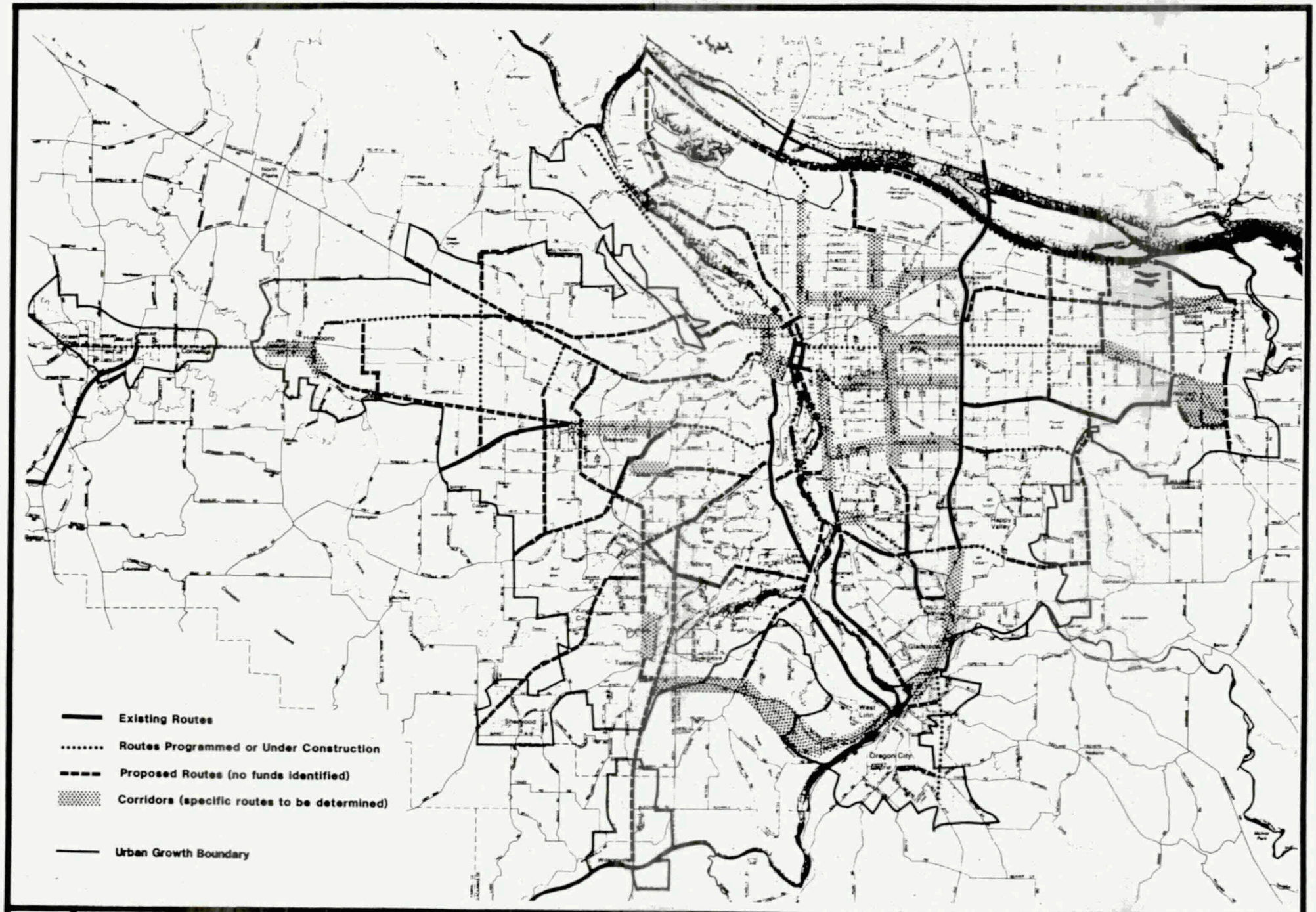
d. Flexible Working Hours

Flexible working hours help to shift travel out of the normal peak hours and therefore lessen the need for additional highway and transit investments. The recommended transit plan has incorporated a modest assumption that the peak hour will spread by assuming the percentage of all-day transit trips that occur during the peak hour will remain constant at the current 16 percent rate rather than increase to 18-19 percent. This reduces the need for more transit equipment and minimizes the operating cost to carry the very high peak load.

e. Bicycling

The use of the bicycle as an alternate mode of transportation to work, shopping, schools and recreational opportunities as well as to access the transit system can reduce the number of vehicle trips on the region's highway system and lessen the need for vehicle parking investments. The adopted Regional Bicycle Plan designates approximately 270 miles of regional bicycle routes within the region (Figure 4-7). This bicycling network will afford the opportunity for safe and convenient travel by bicycle between jurisdictions and to major trip attractions throughout the region.

In addition, high security bicycle racks are planned at major transit stations (Hollywood, Gateway, Gresham, Milwaukie, Beaverton, Tigard, Tualatin, Sunset, Clackamas Twon Center, Oregon City, Lake Oswego, Burlingame and Vancouver) and major park and ride lots (Columbia/Sandy, Lents, Clackamas Towen Center, Oregon City, Milwaukie, Tigard, Tualatin, Washington Square, Beaverton, 170th Avenue, 185th Avenue and Hillsboro. The installation of these bicycle racks is subject to funding availability and local jurisdictional approval. Exceptions to this provision must be sought as an amendment to the RTP.




Regional Transportation Plan

# REGIONAL BICYCLE ROUTE SYSTEM

FIG. 4-7

Among the actions that should be considered by local jurisdictions are:

- provision of secure bicycle parking facilities at employment centers, minor transit stations, minor park and ride lots, schools, high-density residential developments, shopping centers, libraries, etc.;
- establishment of voluntary bicycle marking programs;
- development of safety education and awareness materials and programs; and
- support for consistent enforcement of all rules of the road pertaining to bicyclists.

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Chapter 5

# RECOMMENDED TRANSPORTATION IMPROVEMENTS TO THE YEAR 2000

## A. OVERVIEW

The following sections of this chapter detail, on a sector by sector basis, the major transportation improvements and programs included in the Plan to achieve the major goals outlined in Chapter 1: to provide adequate mobility on the region's transportation system within recognized financial and environmental contraints. The transportation improvements included in the Plan represent a set of investments that have been chosen after vigorous local and regional review of possible alternatives, and are considered to be the most prudent and cost-effective use of public funds to solve the region's transportation problems. It should be noted that the full RTP, as well as the cost estimate, includes projects beyond the major improvements mapped in this Chapter.

In addition to the highway, transit and demand management investments specifically related to each sector, the following region-wide demand management programs currently in existance are recommended to continue:

- Areawide Carpool Matching Program: A free service which matches potential carpoolers with other carpoolers.
- Employer Contact Program: A program which directly contacts employers and offers assistance in rideshare programs.
- Bicycle Marketing and Employer Incentive Program: A program aimed at increasing awareness and public acceptance of bicycling as an alternative mode of transportation.

Other current demand management programs in force at the city level recommended to continue are:

- City of Portland Downtown Parking Program: A cooperative program between Tri-Met and the City of Portland whereby carpools of three or more can purchase parking permits for $15 month and receive unlimited parking at any six-hour meter in downtown Portland. The City of Portland has also designated approximately 300 parking meters in Portland as "carpool only" before 9:00 a.m. on weekdays.
- Downtown Portland Parking and Circulation Plan: This plan encourages trips to and within downtown Portland in shared vehicles, on transit, on bicycles and by walking. This is primarily accomplished by managing parking. There is a limit on the total number of allowable parking spaces in the downtown, and there are also management measures to encourage short-term parking and maximum parking space ratios for new development.

- Portland Employers Flextime Program: A program to promote and analyze flextime at selected demonstration firms in the City of Portland.
- City of Portland Bicycle and Pedestrian Program: A program to increase the percentage of persons bicycling and walking in the City of Portland. Has a goal of five percent of all Portland work trips on bicycle by 1985.

B. NORTHERN SECTOR

The investment strategy for the Northern Sector (Figure 5-1) combines several highway, transit and demand management improvements designed to:

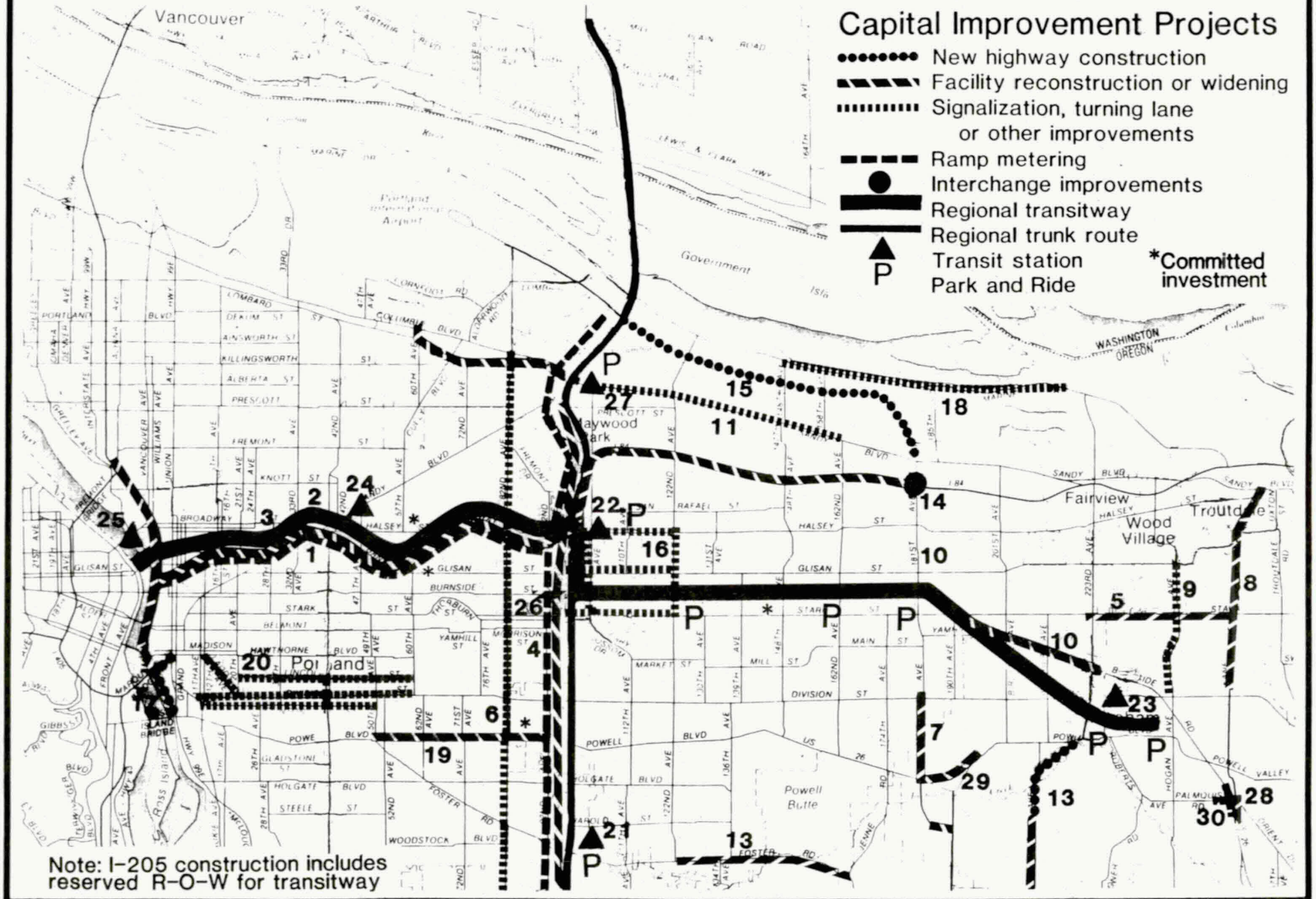
- reduce congestion in a) the major radial interstate corridor by reconstructing the I-5 Bridge over the Oregon Slough and Delta Park/Jantzen Beach Interchange (1); widening I-5 to six lanes at Portland Boulevard (2) and constructing a collector-distributor road between the Fremont and Morrison Bridges (3); and b) in the major interstate circumferential corridor by completing the widening of the I-205 Freeway from 4 to 6 lanes (4);
- remove through traffic from local streets by completing the widening of the I-205 Freeway (5) and improving 82nd Avenue (6), Sandy Boulevard (7), and Killingsworth Street (8);
- increase access to the major industrial centers in the sector by improvements to Columbia Boulevard west of I-5 (9), by connecting Columbia and Lombard at NE 60th (10) and widening NE Killingsworth from 60th to I-205 (11), Marine Drive (12) and N. Vancouver Way (13), by constructing the Greeley ramps on I-5 North (14), a connection through North Rivergate from Marine Drive to North Lombard Street (15), and a new access to Terminal 4;
- improve crosstown transit services by establishing a grid system generally oriented around the Banfield light rail transit (LRT), providing improved north-south service in East Portland and providing new service on Columbia Boulevard;
- improve transit service on the regional trunk routes by providing high-quality transit service in the I-205 (16) and I-5 corridors (17);
- improve transit transfer opportunities by 1) providing transit stations at St. Johns (18), Jantzen Beach (19), Kenton (20) and Sandy/Columbia Boulevards (21), as well as in downtown Vancouver and at Vancouver Mall in Clark County, and 2) implementing the transit transfer project;
- improve the operating efficiency of I-205 through ramp metering (22);
- increase auto occupancy in the corridor and reduce the number of single occupant automobile trips crossing the I-5 Bridge through the I-5 Rideshare project and special carpool ramp lanes on the metered freeway ramps; and
- completing the programmed regional bicycle facilities in the sector (Figure 4-7).


| METRO | Regional Transportation Plan | NORTHERN SECTOR | FIG. 5-1 |
|---|---|---|---|

C. EASTERN SECTOR

The adopted plan for the Eastern Sector (Figure 5-2) combines significant levels of highway, transit and demand management investments to:

- accommodate travel demands in the major radial corridor by widening the Banfield Freeway (1) and constructing the Banfield LRT (2);
- improve the operating efficiency of the Banfield (3) and I-205 through ramp metering and widening to 6 lanes (4);
- remove through traffic from local streets and increase north/south grid connectivity to the regional system by improvements to , 82nd Avenue (6), 182nd Avenue (7), and 242nd (9) and 257th (8) in the Troutdale area;
- provide a new principal arterial route from US 26 east of Gresham to I-84 via Burnside and 181st Avenue (10);
- increase access to the major retail and industrial centers in the corridor by improving Sandy Boulevard (11), the I-84/181st Avenue interchange (14), circulation in the Hollywood Business District, Inverness Drive (15) and the signal system in the Gateway area (16), as well as constructing the Water Avenue ramps and improved street connections from the Central Eastside to I-5 southbound (17);
- increase supportive arterial function by improving Marine Drive (18), Powell Boulevard (19), Foster Road (13) Burnside (26), Stark (5); Division Street (20); and Halsey;
- improve crosstown transit services by establishing a grid system generally oriented around the committed Banfield LRT and providing east-west service in North and Northeast Portland, and East Multnomah County. New service will be provided on Sandy Boulevard, Towle Road, Roberts, Palmquist, Stark Street and Troutdale Road;
- improve transit transfer opportunities by 1) providing transit centers at Lents (21), Gateway (22), Gresham Hospital (23), Hollywood (24), Coliseum area (25) 102nd Avenue LRT and Sandy/Columbia (27), 181st LRT, Union-Grand LRT and Coliseum LRT, and 2) implementing the transit transfer project;
- improve access to transit by providing park and ride facilities at Sandy/Columbia, Gateway, Lents, 122nd, 162nd, 181st, Gresham City Hall and the Banfield line terminus;
- reduce the number of single occupant automobile trips in the corridor through the Lloyd Center Carpool Program and special carpool lanes on the metered freeways;
- facilitate traffic flows and circulation by improving the connection between Kane Road and Highway 26 (28), the 182nd/190th arterial (29) and the intersection of Highway 26 and Palmquist Road (30); and
- constructing the programmed regional bicycle facilities in the sector (Figure 4-7).




Regional Transportation Plan

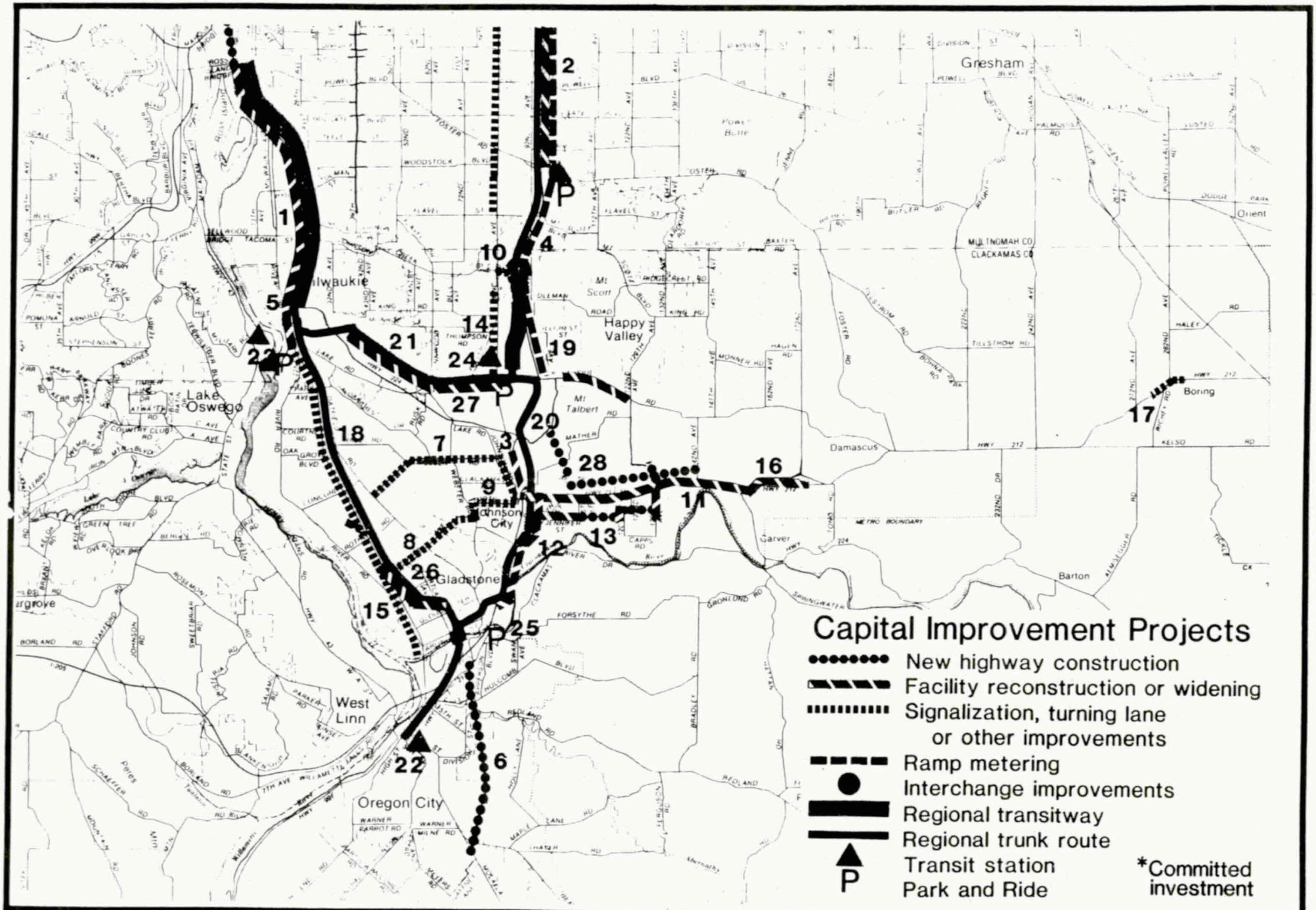
# EASTERN SECTOR

FIG. 5-2

D. SOUTHERN SECTOR

The improvements recommended in the Southern Sector (Figure 5-3) combine highway, transit and demand management investments to:

- reduce congestion in the two major radial corridors through widening of McLoughlin Boulevard from Milwaukie north (1), the widening of I-205 to 6 lanes (2), and an auxiliary lane on I-205 from 82nd Avenue to Highway 212/224 (3);
- improve the operating efficiency of I-205 through ramp metering north of Sunnyside Road (4);
- remove through traffic from local areas by improvements to McLoughlin Boulevard (5), actions in the Sellwood area to divert through traffic and construction of the Oregon City Bypass (6);
- increase east-west access through improvements to Thiessen (7), Jennings (8) and Roots Roads (9) between McLoughlin Boulevard and I-205;
- increase access to major developments along I-205 through a new interchange and connecting arterial(s) north of the Clackamas Town Center (10) and improvements to Highway 212 east of I-205 (11) and 82nd Drive (12);
- protect the flow of through traffic on the Milwaukie Expressway (Highway 224) by maintaining the option for grade separation and/or closure of signalized intersections;
- improve the through trip capacity of Highway 224 through a signal intertie and other traffic management techniques;
- improve circulation, increase industrial access, and reduce through trip conflicts with local movements by roadway improvements and access modifications in the Clackamas area north of Highway 212 (28), south of Highway 212 (13); and north and east of Highway 224;
- improve arterial flows through improvements to 82nd Avenue (14) and South McLoughlin Boulevard (15) and a climbing lane on Highway 212 east of Highway 224 (16) and improvements on Highway 212 through Boring (17);
- support transit dependent high density development nodes and improve transit service through implementation of a timed-transfer system by providing trunk routes from Oregon City to Milwaukie and Portland on McLoughlin Boulevard (18); Oregon City to Clackamas Town Center and East Multnomah County on 82nd Drive, a busway north of Clackamas Town Center to the new I-205 interchange (19) and I-205 (20); and Clackamas Town Center to Milwaukie and Portland on Railroad/Harmony (21). New service will be provided in the Milwaukie and Happy Valley areas on 112th, Mt. Scott Road, Idleman and 92nd;
- improve transit transfer opportunities by 1) providing transit centers at Oregon City (22), Milwaukie (23) and Clackamas Town Center (24) in Clackamas County, and 2) implementing the transit transfer project in the City of Portland;




Regional Transportation Plan

# SOUTHERN SECTOR

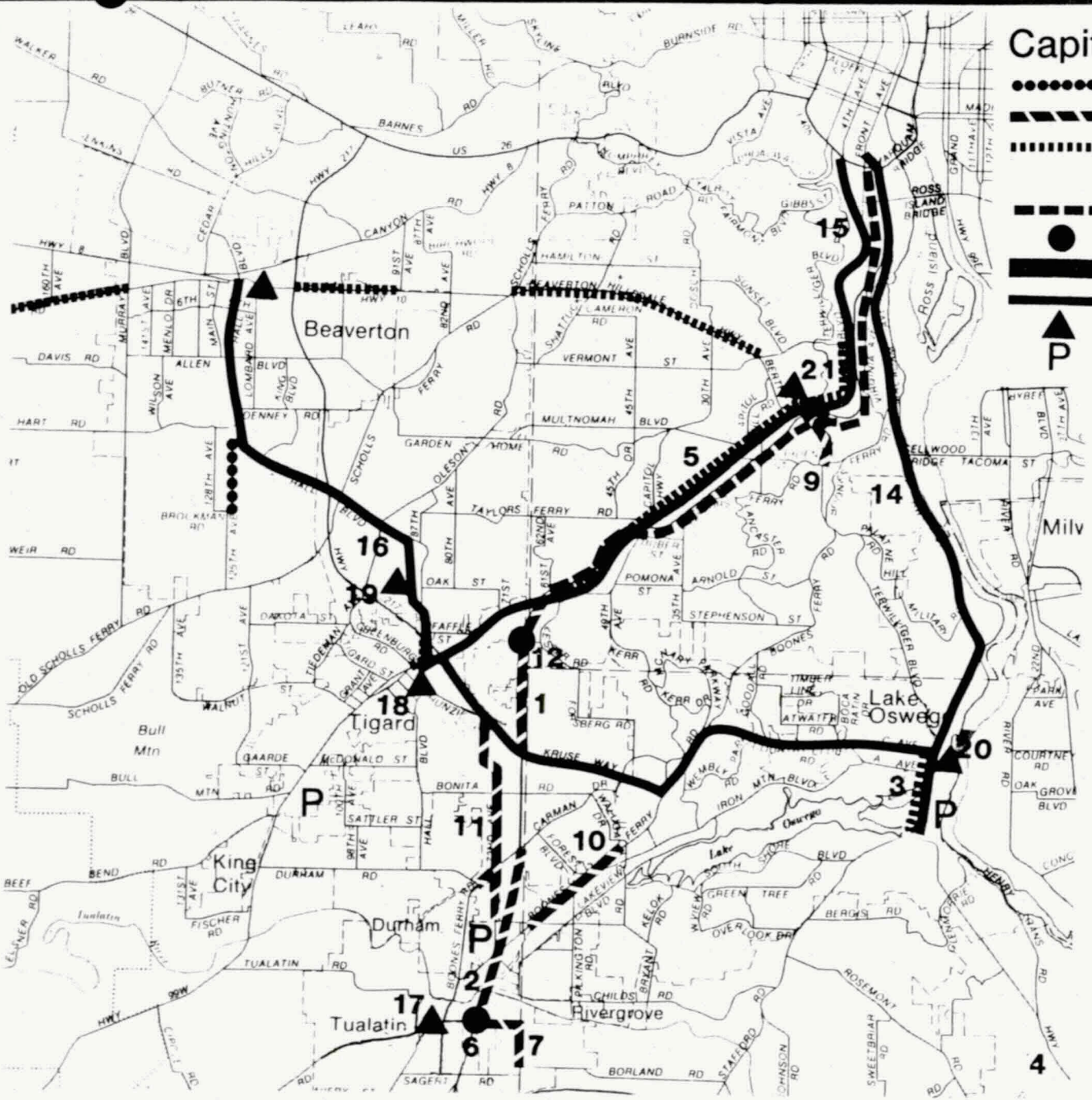
FIG. 5-3

- improve transit service for the McLoughlin Boulevard trunk route through bus priority treatment on North McLoughlin Boulevard (including consideration of an HOV lane); facility improvements on South McLoughlin Boulevard and by investigating the upgrading of the PTC bridge and/or other Clackamas River crossings for bus use (25);
- improve transit access for the McLoughlin Boulevard trunk route to Oregon City through Gladstone by upgrading Abernethy Lane from McLoughlin to Portland Avenue (26);
- improve transit service for the Milwaukie-Clackamas Town Center trunk route through improvements to Railroad/Harmony (27);
- protect right-of-way for a transitway in the I-205 Corridor from the Clackamas Town Center to Gateway;
- elsewhere in the Southern Corridor, protect options for a transitway from Portland to Oregon City via the McLoughlin Corridor and Highway 224/I-205 Corridor.
- improve access to transit by providing park and ride facilities at Clackamas Town Center, Milwaukie, Oregon City the east end of the Highway 212 industrial area, near Clackamas Community College, and Foster Road at I-205;
- decrease the number of single occupant automobile trips in the corridor through priority treatment for high occupancy vehicles on McLoughlin Boulevard and the McLoughlin Boulevard Rideshare program; and
- constructing the programmed regional bicycle facilities in the sector (Figure 4-7).

## E. SOUTHWESTERN SECTOR

The improvement strategy for the Southwestern Sector (Figure 5-4) combines highway and transit investments to:

- reduce congestion in the two radial corridors by ramp metering and widening to the I-5 South Freeway to six lanes (between Highway 217 and Barbur Boulevard) (1) adding a southbound auxiliary lane on I-5 South between Carmen Drive and I-205 (2), and by improving intersections and signals along State Street in Lake Oswego (3), Highway 43 from Lake Oswego to I-205 (4) and on Barbur Boulevard from Slavin Road to the N. Tigard Interchange (5);
- remove through traffic from local streets and improve freeway access by improvements to the Nyberg Road/I-5 interchange (6), SW 65th Avenue (7), Wilsonville Road (8) Terwilliger Boulevard (9) and the Haines Road/I-5 Interchange (12);
- improve major arterial access from I-5 to Lake Oswego through a widening of Boones Ferry Road (10);
- increase access to the industrial developments through improvements to 72nd Avenue (11);
- reconstruct existing transit service in the southwestern sector through implementation of a timed-transfer system by providing trunk routes on Macadam (14), Barbur (15) and in the Highway 217 (16) corridor with improved local




## Capital Improvement Projects

- New highway construction
- Facility reconstruction or widening
- Signalization, turning lane or other improvements
- Ramp metering
- Interchange improvements
- Regional transitway
- Regional trunk route
- Transit station
- Park and Ride (P)

*Committed investment

### Wilsonville Inset




METRO | Regional Transportation Plan

# SOUTHWESTERN SECTOR

FIG. 5-4

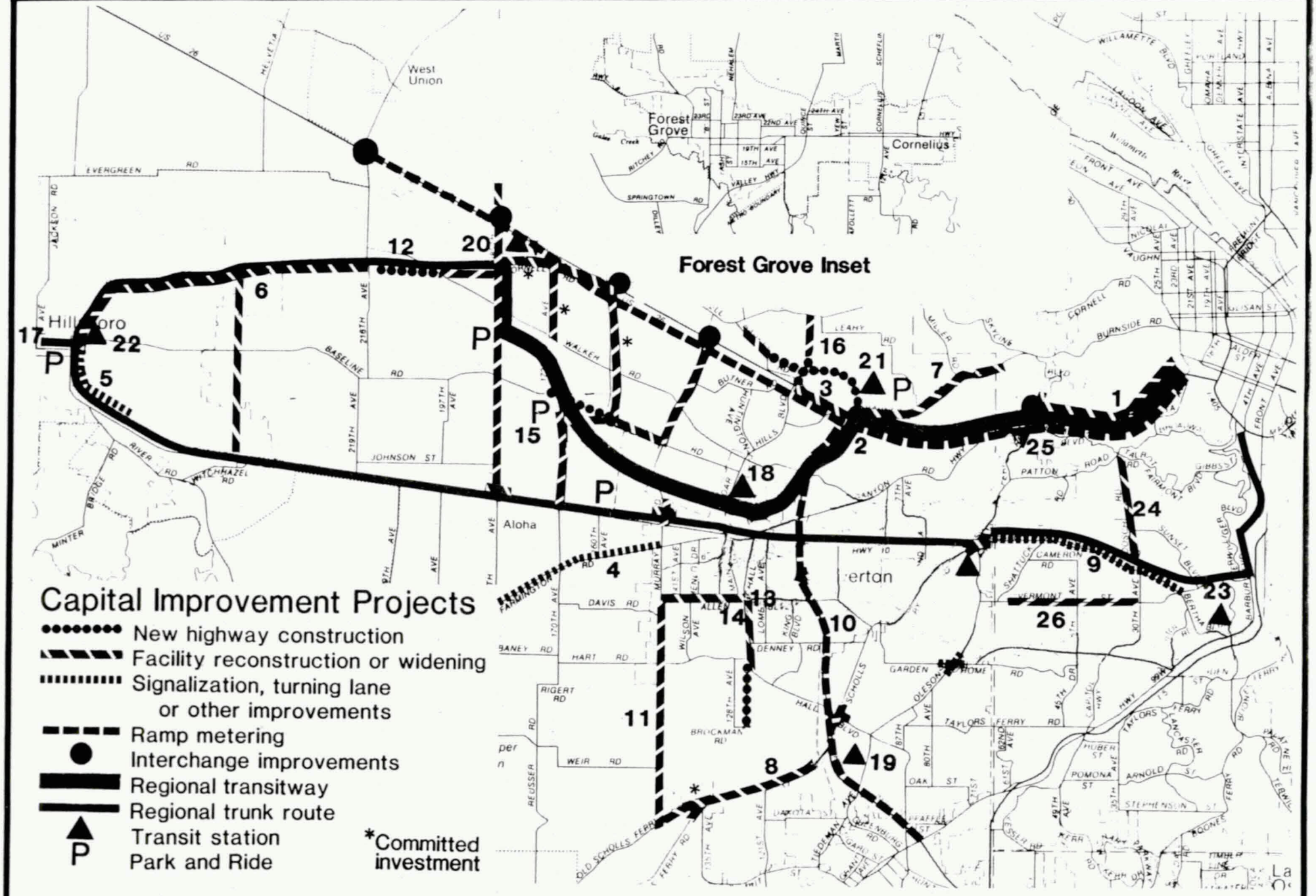
service in Tigard, Washington Square, Tualatin, Lake Oswego and Burlingame. New service will be provided on sections of Scholls Ferry Road, 121st Avenue, Beef Bend Road and Patton Road;

- protect options for bus priority treatment on Barbur Boulevard from Beaverton-Hillsdale to the Tigard Transfer Station;
- improve transit opportunities by providing transit centers at Tualatin (17), Tigard (18), Washington Square (19), Lake Oswego (20) and Burlingame (21). The existing Barbur Boulevard Bus Transfer Station will be maintained as an integral part of the system;
- improve access to the transit system by providing park and ride facilities in Lake Oswego, Tualatin and Tigard; and
- constructing the programmed regional bicycle facilities in the sector (Figure 4-7).

F. WESTERN SECTOR

The adopted plan for the Western Sector (Figure 5-5) combines significant levels of highway and transit investment to:

- reduce congestion in a) the major radial corridor by a westbound climbing lane (from the Vista Ridge tunnel to Sylvan) and ramp metering on the Sunset Highway (1); reconstruction of the Highway 217/Sunset Highway interchange (2), widening of the Sunset Highway to six lanes from Highway 217 to Cedar Hills Boulevard (3), improving the interchanges of the Sunset Hwy. and Skyline/Scholls Ferry, Murray Rd., 158th, 185th and Cornelius Pass Rd., intersection improvements to Farmington Road (4) and Tualatin Valley Highway (5), widening of Cornell Road (6) Barnes Road (7), Scholls Ferry Road (8) and the Beaverton-Hillsdale Highway TSM (9); and b) the circumferential corridor by ramp metering Highway 217 (10) and widening Murray from Allen to Scholls Ferry (11) and widening Hall from Allen to Greenway (13);
- develop a major arterial connnection from the Sunset Highway to Hillsboro by widening Cornell Road west of 216th and widening Cornell Road from the Sunset Highway to 216th (12);
- remove through traffic from local streets and the Beaverton core by improving the Murray Boulevard, Allen Boulevard (14) and Scholls Ferry Road;
- increase access to the existing and planned residential, commercial and industrial developments in the sector by providing an infrastructure of arterial improvements in central Washington County (15) and north of the Highway 217/Sunset interchange (16);
- reduce congestion in downtown Hillsboro by widening Baseline Road west of Dennis (17);
- improve circulation and safety in West Portland by improving Dosch Rd. (24), Skyline Boulevard (25) and Vermont Road (26);




Regional Transportation Plan

# WESTERN SECTOR

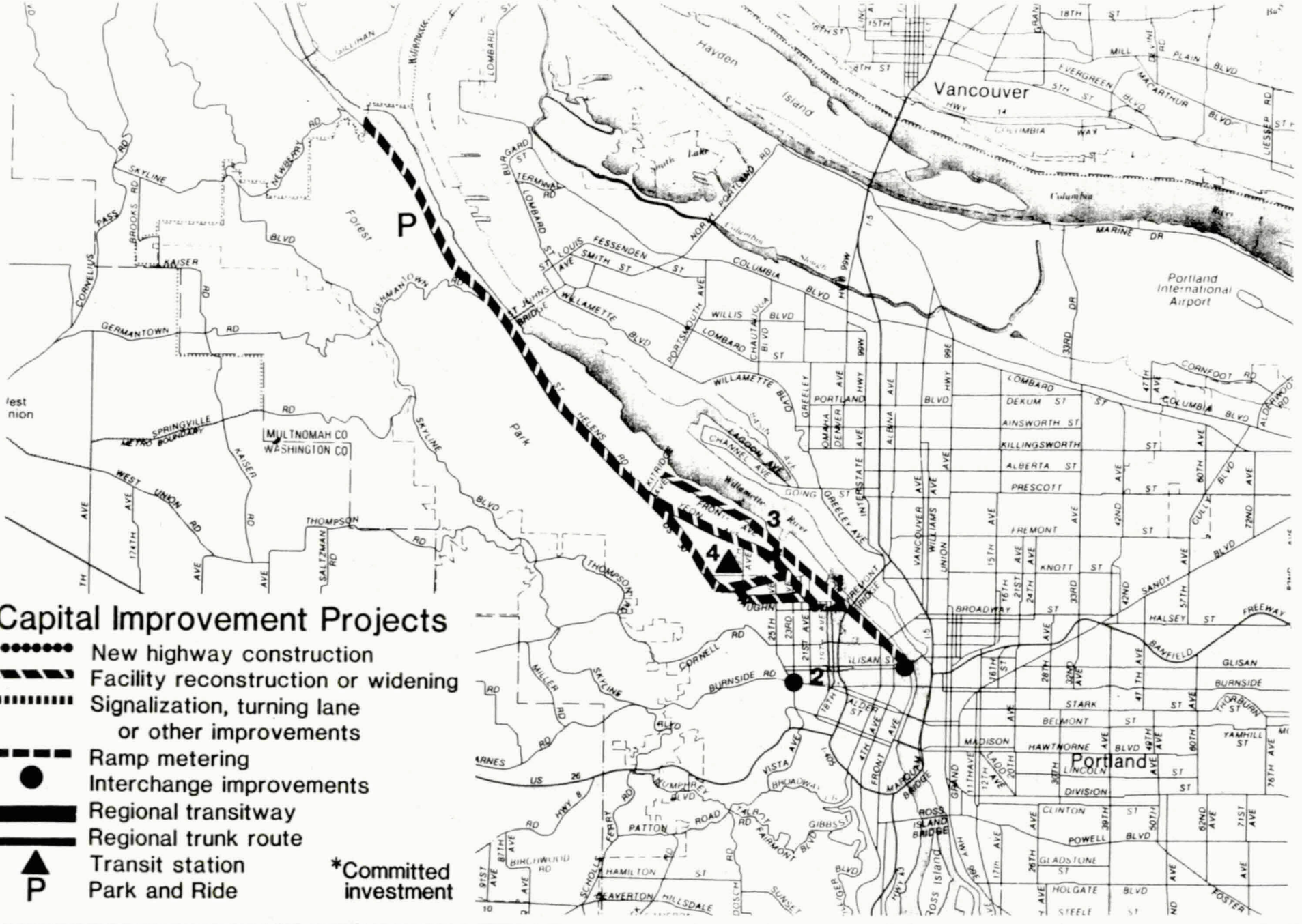
FIG. 5-5

- the Westside Corridor Transitway Alternatives Analysis resulted in a decision that the Sunset LRT alighment is the preferred alternative to provide connecting downtown transit trunk service connecting downtown Portland and Beaverton (to 185th);
- Westside Corridor transit service will be provided by an expanded timed-transfer system consisting of major transit stations at Beaverton (18), Washington Square (19), Tanasbourne (20), Sunset/217 (21), Hillsboro (22), and Burlingame (23);
- the Westside system will also include a multiple transfer point transit network in S.W. Portland with increased connections to Beaverton described in section E;
- the planned transit service will be phased with development in the sector and will be implemented in such a manner as to be compatible with the potential implementation of the Sunset LRT.
- improve access to the transit system by providing park and ride facilities in Hillsboro, west of Beaverton, at Sunset/Highway 217, Murray Blvd., 170th and 185th; and
- construct the programmed regional bicycle facilities in the sector (Figure 4-7).

G. NORTHWEST SECTOR

The investment strategy for the Northwest Sector (Figure 5-6) is composed of highway and transit improvements to:

- reduce congestion in the radial corridor by providing direct connections from US 30/Yeon Avenue to the Fremont Bridge (1);
- remove through traffic from the northwest residential areas by diverting these trips along Yeon Avenue/St. Helens Road and by improvements to the N.W. 23rd and Burnside intersection and other NW neighborhood streets (2);
- improve circulation and increase access to employment centers in the area by completing the Fremont Bridge connection to US 30 and improvements to Front Avenue (3);
- modify the existing transit system to provide minor route extensions to serve new areas and to improve accessibility. New service is provided along Front Avenue and other parts of the Northwest Industrial area, as well as along Cornell and Thompson Roads;
- improve transit transfer opportunities through the transit transfer project and a transit station on NW 23rd (4);
- improve access to transit by providing a park and ride facility in Linnton;
- reduce auto traffic through development of a rideshare program to northwest industrial areas; and
- construct the programmed regional bicycle facilities in the sector (Figure 4-7).




Regional Transportation Plan

# NORTHWESTERN SECTOR

FIG. 5-6

## H. DOWNTOWN PORTLAND SECTOR

The adopted plan improvements for the downtown Portland sector (Figure 5-7) include:

- maintain access to downtown Portland by providing increased radial transit service to absorb additional travel associated with future development;
- maintain freeway efficiency to discourage through traffic on downtown streets;
- minimize conflicts between pedestrians, automobiles and transit vehicles by providing for preferential transit and pedestrian treatment;
- modify 5th and 6th Avenues for light rail to accommodate the Banfield (and other) LRT line capacity requirements beyond that provided by the cross-mall alignment;
- extend the 5th and 6th Avenues Transit Mall both north and south for increased bus and/or LRT transit operations;
- investigate the feasibility of alternative LRT streets as part of future LRT corridors projects;
- reroute some bus routes off the transit mall as the mall reaches its transit capacity and designate additional transit streets in compliance with the downtown plan and street functional classification;
- reduce the number of single occupant automobile trips into the CBD through the carpool meter permits, the RX Parking Program and the Downtown Portland Parking and Circulation Policy;
- Update signalization management to improve traffic flow;
- increase access and transit service into the South Waterfront Development area through improvements to Front Avenue and Moody Avenue;
- transit service in downtown should maximize electric vehicles to minimize environmental impact; and
- various TSM improvements in downtown Portland to increase transit operating capacity, maintain existing traffic volumes, provide increased transit connectivity and reduce conflicts between transit vehicles, automobiles and pedestrians.

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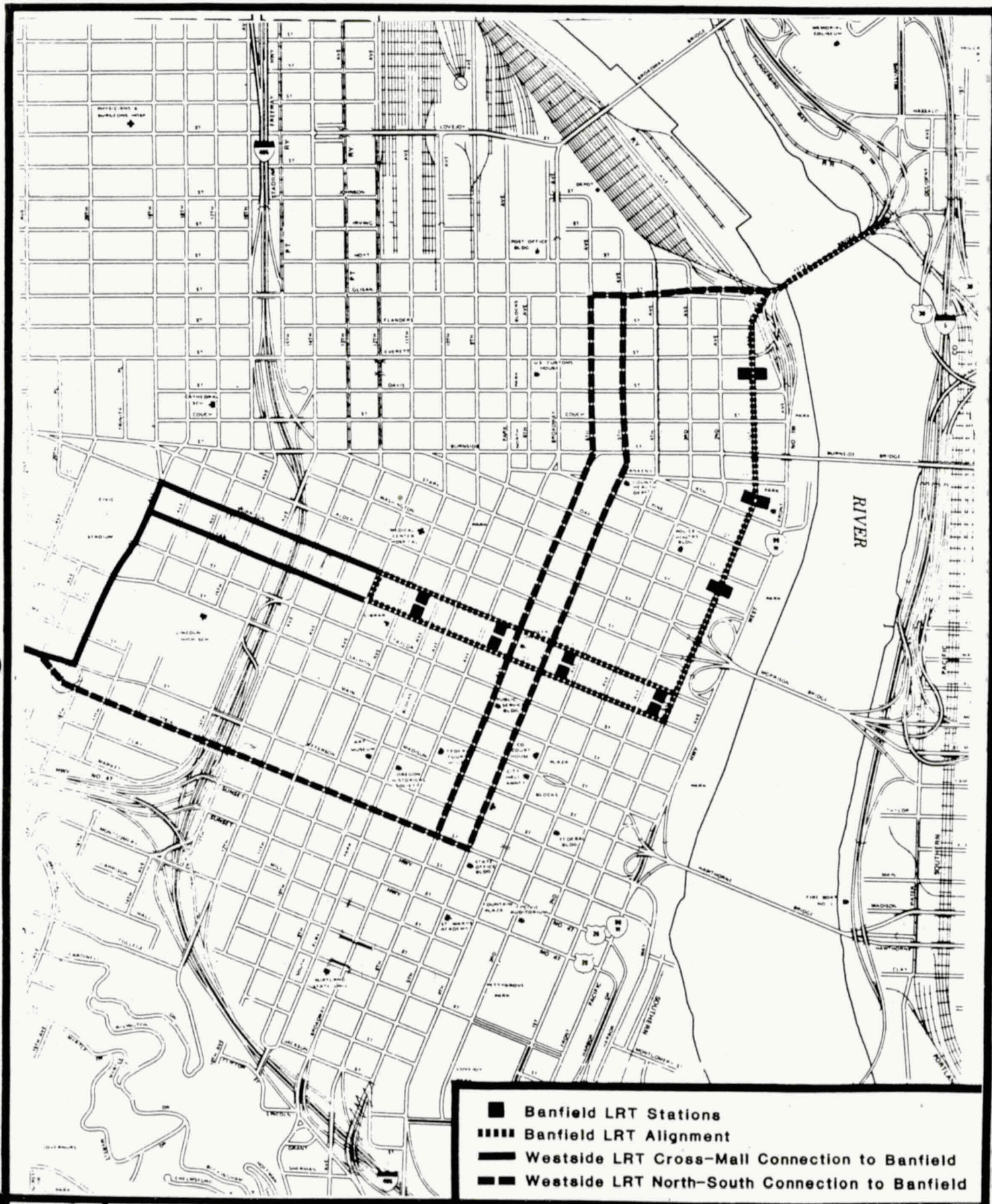



METRO

Regional Transportation Plan

# DOWNTOWN PORTLAND SECTOR

**FIG. 5-7**

## COST AND FINANCIAL ANALYSIS

## SECTION III: REGIONAL BICYCLE ROUTES

### A. Overview

Implementation of proposed bicycle routes in this region is contingent primarily on the amount of funding available and the manner in which priority projects are determined. Although funding sources have remained the same over the past ten years, revenue from the State Highway Fund has stabilized or partially declined as a result of lower gasoline consumption rates. This has occurred even as construction costs continue to escalate. This chapter describes the existing sources of funds available for bicycle projects, recommends a methodology for allocating these funds in an efficient and equitable manner, and discusses the importance of securing additional funds to hasten facilities development.

### B. Background

During the early 1970s, there was a bicycle boom across the country and in Oregon. Rising gasoline prices forced many people to seek alternatives to the automobile for their transportation needs, and many turned to the bicycle. As more and more bicyclists took to the streets, they found that many of those streets were not adequate to ride on.

Concerned citizens felt this issue to be important enough to warrant legislative action. As a result, the Oregon Legislature enacted what became known as the "Bicycle Bill." This 1971 legislation mandated the expenditure of not less than one percent of the State Highway Fund (gasoline tax revenues) received each year by the State or by any city or county for the establishment of bicycle trails and footpaths.

This statute further requires that the amount "shall never in any one fiscal year be less than one percent of the total amount of the funds received from the highway fund" (unless that amount is less than $250.00 in any year for a city, or $1,500.00 for a county). In lieu of spending these funds each year, a city or county may credit the funds to a bikeway financial reserve where they can be held for not more than 10 years.

The success of that legislation, together with the comprehensive bicycling development effort that emerged from it, resulted in the completion of over 70 miles of bicycle routes throughout the region, representing an investment of over $6.5 million over the past 10 years.

C. Funding Sources

In addition to local jurisdictions' general funds, there are presently two major sources of funds available for bicycle projects in this region: Federal Highway Trust Funds and Oregon Gasoline Tax Revenues. These are described below.

1. Federal Highway Trust Funds -- Although no federal statute requires bikeways to be built on federal highways, federal policy (23 CFR 652.5) states that "full consideration is to be given to safely accommodate bicycle/pedestrian traffic on all Federal Aid highway projects." Further, 23 USC 109(n) prohibits "severance or destruction of an existing major route for non-motorized vehicles unless such project provides for a reasonable alternative route or if such a route already exists."

   From the Federal Highway Trust Fund, two alternatives for funding bicycling facilities are provided:

   a. Constructing bicycle and pedestrian facilities as part of any Federal Aid highway project and within publically-owned right-of-way. Federal participation for bicycle projects is at the same rate (usually 88 percent) as the highway facility to which it is attached. However, Federal Aid Urban projects are eligible for 100 percent federal funding.

   b. Constructing bicycle and pedestrian facilities independently of a highway project, but serving corridors that are part of the federal highway system.

2. Oregon Gasoline Tax Revenues -- The entire State Highway Gas Tax Fund is divided among the State (68 percent), the counties (20 percent) and the cities (12 percent). The formula used by the State for allocating gasoline tax revenues to individual cities and counties is based on total vehicle registration for counties and total population for cities. The Bicycle Bill mandates that a portion of these funds be used for bicycle facilities development as described below:

   a. Cities' and Counties Portion

      Cities and counties are required to spend not less than one percent of their State Highway Fund monies for the establishment of footpaths and bikeways.

      In addition, the Oregon Transportation Commission has determined that this money may be spent for other uses such as:

      - Administrative and personnel costs of bicycle programs.

- Preliminary engineering costs of bikeways.
- Construction and right-of-way costs for bikeway/footpath facilities within highway right-of-way.
- Auxiliary facilities such as signs, curb cuts, ramps, and parking.
- Maintenance of existing bikeways/footpaths.
- Development and printing of bicycle route maps and brochures.

b. State's Portion

The State is required to spend not less than one percent of total gasoline tax revenues on bicycle and pedestrian projects under the following system of priorities:

Priority One

- Construction of bikeway projects wherever a highway, road or street is constructed, reconstructed or relocated. This is primarily used as match for projects funded with Federal Aid monies and for State projects.

Priority Two

- Maintenance of existing bikeways for which the State is responsible.

Priority Three

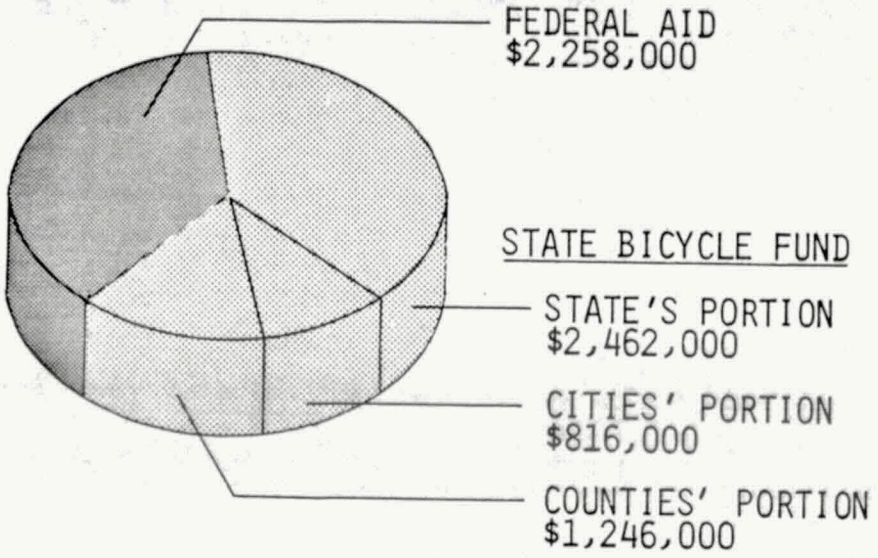
- Construction of bikeway projects independent of a highway project, but within State highway right-of-way.

Priority Four

- Construction of local governments' bikeway projects on or off the State highway system (requires local match).

D. Allocation of Funding Sources

The total amount of funds spent from major funding sources over the last decade in the Portland metropolitan area is shown in Figure 7-15. Federal Highway Trust Fund monies were the second largest source of revenues for bicycle projects during this time period. The majority of these funds were spent on bicycle projects constructed as part of a highway project. However, the total amount also includes some bicycle projects constructed independently of a highway project.




**Total**
**$6,782,000**

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**TEN YEAR BICYCLE EXPENDITURE RECORD: FY 1972-1982**
Portland metropolitan area

**FIG. 7-15**

Figure 7-15 also illustrates that the State's portion of the Bicycle Fund was the largest source of funds for constructing bicycle projects in this region during the last 10 years. While expenditures for the State's portion cannot be delineated by priority category, the majority of the fund was used to construct Priority 1 and Priority 3 projects.

The cities' and counties' portions of the State Bicycle Fund may be spent by jurisdictions on any bicycle projects which they deem appropriate. These projects may be in conjunction with or independent of highway projects. Figure 7-16 illustrates the amounts received by cities and counties in the Portland metropolitan area in FY 1982.

Multnomah, Washington and Clackamas Counties received a combined total of $117,000 in 1982. Over one-half of the total amount was received by Multnomah County; 25 percent received by Clackamas County and 23 percent by Washington County.

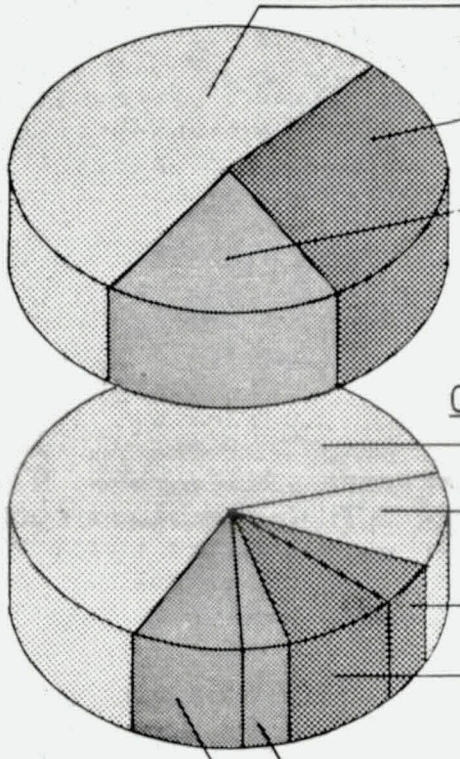
Based on their population, 19 cities in the tri-county area within the Urban Growth Boundary (UGB) received a combined total of $78,000 for bicycle projects. Amounts ranged from a low of $308.00 allocated to Wood Village to a high of $48,549 allocated to Portland. (Medium-sized cities such as Beaverton and Lake Oswego received between $3,000 and $4,000 each.)

Five cities in the metropolitan area (Rivergrove, Maywood Park, Johnson City, Happy Valley, and Durham) received no funds from the State in 1982 because their gasoline tax receipts totaled less than $250.00. The totals illustrate that on an annual basis, most cities do not receive sufficient funds to implement even a fairly modest bicycle project.

Figure 7-17 shows how the State's portion of the Bicycle Fund was allocated to the Portland metropolitan area, by priority category, in FY 1983. The largest portion of the State's funds were spent on projects built in association with a highway project. (This money is used primarily to match Federal Aid participation in bicycle projects at a 12 percent rate.)

Funds for maintaining existing bicycle routes on State highways comprised only 15 percent of the total State budget for bicycle routes; however, funds for maintenance will increase as more bikeways are built.

Funds spent on bicycle projects constructed independently of a State highway (Priority 3) nearly equaled the amount spent under Priority 1 projects. However, there were no funds available in FY 1983 for Priority 4 projects (assistance to local governments). This was because distribution of money under Priority 4 varies from year to year based on the amount remaining after allocation of funds to the first three priorities. This policy is currently under review by ODOT and the State Bicycle Advisory Committee.



| COUNTIES' PORTION | |
|---|---|
| Multnomah | $61,100 |
| Clackamas | 29,400 |
| Washington | 27,300 |
| **Total** | **$117,800** |

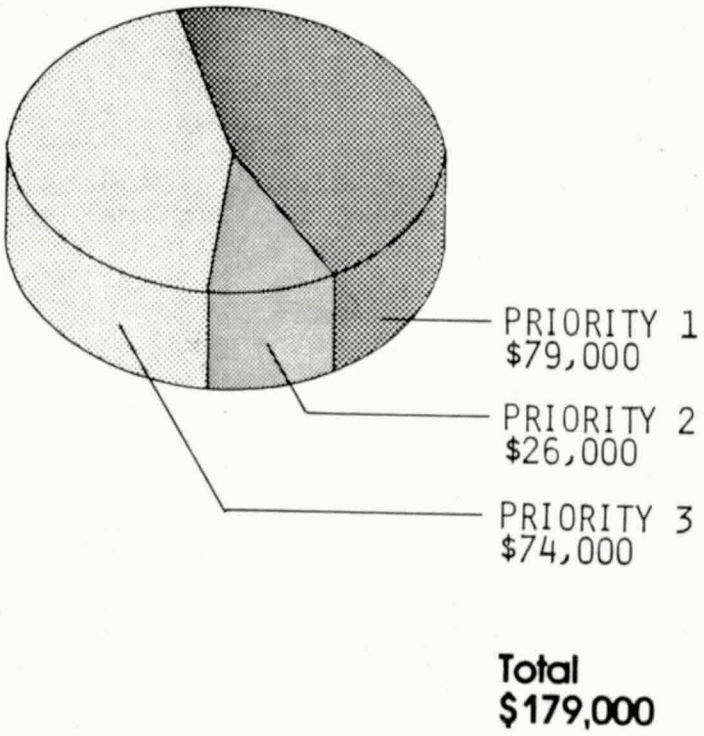
| CITIES' PORTION | |
|---|---|
| Portland | $48,500 |
| All other Multnomah Co. cities | 5,600 |
| Lake Oswego | 3,100 |
| All other Clackamas Co. cities | 7,800 |
| Beaverton | 4,100 |
| All other Washington Co. cities | 9,400 |
| **Total** | **$78,500** |

METRO

Regional Transportation Plan

**BICYCLE FUND REVENUES: FY 1982**
Cities' & counties' portions

**FIG. 7-16**




Note: No funds remained for distribution to local governments under Priority 4 in FY 1983.

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**BICYCLE FUND REVENUES: FY 1983**
By priority category, State's portion

**FIG. 7-17**

E. Cost of Building the Regional System

A variety of factors enter into the construction of a bikeway system, and for that reason, cost estimates at a regional level cannot be developed easily or with great confidence. The configuration for a particular bicycle project depends upon the type of bikeway (whether it is a separated path, a bikeway which is adjacent to the travel lane, or a bikeway that shares the road with motor vehicles), the amount of right-of-way required, the type of construction materials used and the degree of safety for which the bikeway is designed. In addition, jurisdictions estimate costs differently for shoulder widening, striping, signing, and other improvements.

Because of this difference between jurisdictions, a general cost estimate of constructing the regional system has been derived. These general averages are: $100,000 per mile for shoulder widening, $300 per mile for striping, $1,000 per mile for signing in urban areas and $300 per mile for signing in rural areas. A special situation occurs in the City of Portland, where shoulder widening for the purpose of accommodating bicycles is, for the most part, not feasible on narrow city streets. Therefore, a figure of $10,000 per mile was used for bicycle-related improvements such as traffic diverters, striping, signing, and turn bays within the City of Portland.

Each link of the regional bicycle route system yet to be constructed was briefly examined for needed improvements. The cost per mile estimates previously discussed were then applied. The total cost estimates for the regional bicycle route system within each county and the City of Portland are:

| | |
|---|---|
| Clackamas County | $ 2,000,000 |
| Washington County | 4,700,000 |
| Multnomah County | 2,800,000 |
| City of Portland | 4,600,000 |
| Total | $14,100,000 |

It must be emphasized that these figures are very general and are only intended to put into context the amount of money required to build approximately 270 miles of proposed bicycle facilities needed to complete the network. A more definitive cost estimate for completion of these routes would necessitate a formal preliminary engineering process for each route.

Comparison of Capital Costs and Revenues

Of the 270 miles of proposed bicycle routes:

1. 60 miles are under construction or are programmed for construction primarily in conjunction with a highway project, at an approximate cost of $3 million; and

2. 26 miles are likely to be built in conjunction with a highway project within the next 10 years at an approximate cost of $1.4 million.

The remainder of the system has no funding currently identified. However, funds from the State bicycle fund will be sought for many of the routes, and jurisdictions will use general fund and their allocated State bicycle funds to construct other routes.

To understand the magnitude of the expense of constructing a bikeway system, it is necessary to compare costs to the resources available. As described previously, there are very limited sources of funds available to this region for constructing bicycle projects.

As shown in Figure 7-15, money spent on bicycle facilities in this region over the last decade has amounted to $2.2 million from Federal Highway revenues; $2.4 million from the State Bicycle Fund; $1.2 million from gasoline tax revenues received by all three counties; and $0.8 million from gasoline tax revenues received by 19 cities in the metropolitan area. Nearly $7 million has been spent on bikeways in the region over the last 10 years. With 70 miles of completed bikeways, an average cost is estimated at $100,000 per mile.

In most cases, cities and counties have had to accumulate their annual one percent money over several years in order to construct even a one-mile segment of bikeway. This procedure will most likely continue because construction costs continue to increase while revenues are decreasing.

The estimated costs of $14 million to complete the regional system is nearly double the amount spent over the past 10 years. Because revenues from the State gas tax have been relatively constant over the last 10 years while construction costs have continued to escalate, it is imperative that the region and the State look toward procurement of additional resources to fund future bicycle projects. At a minimum, this plan strongly supports retention of the one percent bicycle fund law.

In addition, the Regional Funding Committee should begin to explore options for securing new funding sources for bicycle facilities development. This effort will require cooperation from the region as a whole to ensure completion of the regional bicycle route system.

## F. Conclusions

Funding of bicycle facilities and programs are essential to the implementation of this plan. Without a commitment to seek new funding sources and efficiently use existing sources, many of the proposals called for in the plan may never be realized. The plan recommends:

a. Metro and local jurisdictions to cooperatively seek additional funding sources for constructing bicycle facilities and developing new bicycle programs.

b. Supporting continuation of the State one percent gas tax fund for construction of local and regional bicycle routes in the Portland metropolitan area.

c. Limiting expenditure of the State's one percent bicycle fund monies for bicycle projects constructed independently of a highway project (Priority 3) primarily to bicycle routes designated on the regional bicycle network.

d. Supporting a change in current Oregon Transportation Commission policy to make Priority 3 money available not only to independent bikeways within State-owned rights-of-way, but also on routes parallel to and serving the same corridors as State Highways.

e. Allowing the use of State one percent funds for financial assistance to local government bikeway projects (Priority 4) on either local or regional bicycle routes (at the discretion of local jurisdictions.)

f. Supporting a change in ODOT policy 1) to establish an annual target amount of local discretionary grant (Priority 4) money and 2) to establish an equitable distribution policy for this money that is not biased against areas of highest bicycling use.

g. Establishing a regional funding committee to annually prioritize bicycle projects in this region to submit to the State for funding. This applies to projects eligible for Priority 3 and 4 funds only.

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CHAPTER 8

# IMPLEMENTATION

## A. OVERVIEW

Implementation of the adopted plan involves a cooperative effort of all jurisdictions responsible for the various components. First and foremost, it involves a concerted effort to secure sufficient funding over the next 20 years to build new or improved transportation facilities and maintain and operate an expanded transit and highway system; it involves the construction and operation of the improvements recommended to serve expected growth; and finally, it involves the establishment of a process for monitoring development and growth in travel demand to update or refine the plan and to resolve a number of outstanding transportation issues.

## B. FUNDING

As described in Chapter 7, the funding for implementation of the transportation plan is approaching a crisis situation. Federal funding availability is projected to fall short of capital needs for highway improvements and may be subject to further federal budget cuts. Current state and local sources are inadequate to maintain the existing highway system due to past and expected losses of buying power from inflation and are clearly inadequate for major capital improvements. Local funding is inadequate to operate the significant expansion in transit service called for in the Plan and federal funding for transit capital improvements is uncertain. The amount of funding required to complete the identified Regional Bicycle Route System is nearly double the amount spent on bicycle facilities in the past 10 years. To correct these funding problems, the following activities are necessary:

1. Federal Funding - Metro, ODOT, Tri-Met and the local jurisdictions must present a united front with its congressional delegation and the federal government to ensure past federal funding commitments are fulfilled in a timely manner. In particular, federal legislation is necessary to rectify "Interstate," "Interstate Transfer" and "UMTA-Capital Assistance" funding shortfalls. In addition, loss of federal transit operating assistance would worsen the expected transit funding shortfall.

2. Local Priority Setting - Regardless of how successful this region is in acquiring federal funds, it is clear that priorities must be set to phase plan implementation over a longer than optimal timeframe. JPACT has already undertaken a process to set priorities for the Interstate Transfer program and similar efforts are likely to be necessary for the Interstate and transit expansion

programs. In addition, since Interstate funding is allocated to the entire state, the Oregon Transportation Commission must set priorities between competing projects in the Portland area and elsewhere in the state.

3. State and Local Funding - All of the state, regional and local agencies must establish a coordinated effort to correct state and local funding shortfalls. Adequate funding sources must be secured for both capital expansion projects and ongoing maintenance and operation programs. This could be accomplished through development of a variety of special purpose funding sources in each jurisdiction or through one or more larger state or local funding programs. The alternative techniques should be explored and a complete funding strategy adopted (see Outstanding Issue #1, page 8-9).

## C. TRANSPORTATION SYSTEM IMPLEMENTATION

The RTP identifies the parts of the transportation system most important for regional travel and includes investments to ensure that the regional system can effectively serve expected growth over the next 20 years. Projects that must be included in the RTP are those that: a) are on, or significantly affect, the regional highway, transit or bicycle systems; or b) are proposed to use federal funds. The Transportation Improvement Program (TIP) is the five-year incremental capital improvement program for the region to implement the projects contained in RTP, and includes all transportation projects proposed to use federal funds to implement. As such, the TIP contains projects that are depicted in Chapter 5 of the RTP as well as projects that are included in the RTP but are not of sufficient scope to warrant mapping in this document (signal projects, et al). It is the responsibility of the cities, counties, ODOT and Tri-Met to implement necessary improvements to the regional system as well as those needed for local travel. Because of the interrelationship between different improvements by different jurisdictions, it is important that these improvements be implemented in a manner consistent with the adopted RTP.

1. Highway System Design - It is essential for Metro and the local jurisdictions to designate the full arterial and collector system necessary to serve development of local comprehensive plans anticipated to the year 2000. The RTP includes criteria for a highway classification system (pp. 1-7 through 1-9) and adopts a map (Figure 4-1, p. 4-6) delineating the principal and major arterial components of such a system. In accordance with this, local jurisdictions are required to adopt a map delineating the various highways in their jurisdiction and in so doing, are recommended to adopt Metro's classification categories and definitions. If, however, local jurisdictions elect to retain their own classification categories, they must provide for Metro's

adopted principal routes and major arterials as shown in Figure 4-1, page 4-6. In addition, local jurisdictions are required to designate an adequate Minor Arterial and Collector system to meet two objectives of regional interest:

- the minor arterial/collector system must adequately serve the local travel demands expected from development of the land use plan to the year 2000 to ensure that the Principal and Major Arterial system is not overburdened with local traffic; and
- the system should provide continuity between adjacent and affected jurisdictions (i.e., consistency between neighboring jurisdictions, consistency between city and county plans for county facilities within city boundaries and consistency between local jurisdiction and ODOT plans).

Metro's Classified Highway System map will consist of the Principal and Major Arterials defined in the adopted RTP and the Minor Arterials, Collectors and streets designated for transit service derived from adopted local comprehensive plans.

2. Highway Projects - The RTP includes a large number of individual highway projects, primarily targeted at enabling the Principal and Major arterial system to provide the desired level of service and effectively serve travel demands expected by the year 2000. Those projects will be implemented by local jurisdictions and ODOT based upon the availability of funds. Policy guidelines for programming these projects with federal funds are as follows:

   - projects addressing an existing or near-term (three years) capacity deficiency (v/c program will be scheduled before those addressing longer-term problems;
   - projects necessary to sustain existing or create new permanent jobs will be programmed before others;
   - projects necessary to support transit service as defined in the Transit Development Program will be scheduled before others;
   - projects with a higher local match contribution than required (including ROW dedication or local investment in supporting or parallel facilities needed to ensure optimium operation of the proposed project) will be programmed before others;
   - all other factors being equal, projects on Principal or Major Arterials will be scheduled before others;
   - projects addressing deferred maintenance or structural inadequacy or to protect an existing investment will be programmed before others; and

- other pertinent factors, including, but not limited to safety, air quality and energy conservation will also be considered.

In addition to the principal and major arterial improvements identified this plan, local jurisdictions must ensure that their designated "Minor Arterial" system provides the desired level of traffic service. Toward this purpose, local jurisdictions must identify in their comprehensive plan (or the appropriate implementation program) sufficient investments in transportation capacity to ensure its arterial system can adequately serve at least the travel demand associated with Metro's year 2000 population and employment forecast (Table 2-1, p. 2-11) and subsequent updates. Project objectives for these investments should include at least the arterial level of service defined as minimum desired in the RTP (p. 1-6). Further improvements in transportation capacity consistent with the policies of the RTP that serve more than Metro's year 2000 population and employment forecast and/or to provide a higher level of traffic service can be provided at the option of the local jurisdiction. This identification of transportation capacity must be consistent with the level of transit ridership and ridesharing delineated in the RTP for the particular area, but may include actions to further expand the use of these modes, thereby reducing the need for additional highway capacity. These improvements should be designed to serve the designated function for the street and should first consider low cost actions (such as additional transit expansion, ridesharing, flextime, signal modifications, channelization, etc.) before consideration of a major widening investment.

3. Transit System Designation - The delineation of the transit system must be coordinated between Metro, Tri-Met and the local jurisdictions. Metro's adopted regional transit trunk route system provides direction to Tri-Met on where to target high speed, high capacity service for long distance travel and provides direction to local jurisdictions on where to target high density land uses. In addition to these routes, Tri-Met is expected to adopt a system of sub-regional trunk routes and local routes. Local jurisdictions are required to include Metro's regional trunk routes, transit centers and park and ride lots (Figure 4-2, p. 4-12) in their comprehensive plan and identify other streets suitable for subregional trunk routes and local transit service as a guide to Tri-Met. In addition to these bus route designations, Metro, Tri-Met and the local jurisdictions must agree on specific alignments for the potential transitways (identified on p. 4-14) to be protected from encroachment from development. Local jurisdictions are required to identify these alignments in their local comprehensive plans for future consideration.

4. Transit Service Implementation - The Portland metropolitan area is dependent upon a significant expansion in transit use to accommodate expected growth in travel demand. Expansion in service, however, is very costly and beyond the current financial ability of Tri-Met. As such, Tri-Met must incrementally implement new transit service as growth in ridership demands and financial resources allow. Additional increments of transit service must be phased in consistent with the following criteria:

   - new routes must be cost-effective in terms of ridership return on the operating subsidy;
   - service expansion must be consistent with growth in travel demand in the regional corridors where highway, transit and rideshare improvement programs are interdependent;
   - service improvements should be implemented consistent with new development, particularly in cases where high density developments are dependent on transit capacity;
   - service improvements should be consistent with the local jurisdiction's designation of transit streets.

5. Transitway Implementation - Transitways have been identified as the long-range method to provide regional trunk route service in the radial travel corridors (Figure 4-4, p. 4-14). Local jurisdictions are required to identify these alignments in their comprehensive plans for future consideration. However, due to the high construction cost, incremental implementation is necessary, as growth in transit ridership warrants implementation and as funding is available. The first priority for transitway construction is the Banfield LRT, scheduled to be completed in 1984. The second designated priority is the Westside Corridor where the Sunset LRT alignment has been selected as the preferred alternative to connect downtown Portland and Beaverton (to 185th). The decision to proceed to construction of the Sunset LRT, however, will not be made until after the preparation of a FEIS on the project and an evaluation of one year's operation of the Banfield LRT. Implementation of a transitway in the remaining radial corridors (and potential extensions and branches) will be pursued in a phased manner, as follows:

   - Phase I studies will be initiated to identify the next priority corridor that warrants consideration of a transitway investment and identify a set of alternatives to be examined in more detail. The Phase I study will consider the short- and long-term ridership potential, capital and operating costs, existing or planned transit supportive land uses and right-of-way availability.

- Phase II will be initiated to examine alternatives in detail and select the one that is most cost-effective. The Phase II study will conclude with an Environmental Impact Statement presenting costs, benefits and impacts of the alternatives and identifying the preferred alternative for implementation.

Due to limited staff resources, it is impractical to pursue the preparation of "Draft" Environmental Impact Statements on several transitway corridors simultaneously.

6. Transitway Right-of-Way Reservation - Until such time as a definite decision to construct a transitway is made as a result of the EIS decision process described above, local jurisdictions are encouraged to work with developers to protect logical right-of-way opportunities from encroachment. Parcels that cannot be protected in this manner should be identified to Tri-Met for acquisition on a case by case basis.

7. Handicapped Transit Service - Tri-Met is responsible for providing handicapped transit accessibility including coordination of special transit services provided by social service agencies. In addition, Tri-Met conducts the detailed special handicapped transit planning necessary to identify required service improvements and adopt a plan for meeting federal requirements for handicapped accessibility. (See "Transition Plan of the Tri-County Metropolitan Transportation District of Oregon in compliance with USDOT Transportation Regulations Implementing Section 504 of the Rehabilitation Act of 1973.") Metro must endorse Tri-Met's plan for handicapped accessibility and include expected uses of federal funding in the TIP. In addition to Tri-Met's handicapped service, private, non-profit agencies provide handicapped, services and may apply for federal funding for equipment (through the UMTA Section 16(b)(2) program). Use of this equipment must be consistent with Tri-Met's plan, be included in Metro's TIP and be endorsed by the ODOT-Transit Division to be funded. (Note: The currently adopted plan for handicapped accessibility may be revised due to changes in federal regulations.)

8. Rideshare Promotion - The overall responsibility for promoting ridesharing as an alternative mode of transportation rests with Tri-Met. As described in Chapter 5, this includes regional services for matching prospective carpoolers, assistance to employers and several targeted programs to deal with ridesharing in particular corridors or sub-areas. However, the full scope of implementing potential rideshare strategies is too diverse to characterize as being the responsibility of a single agency. In addition to Tri-Met, local

jurisdictions have responsibility to incorporate into their comprehensive plan rideshare techniques identified in Chapters 1 and 4 of the RTP that are suitable for their area. Similarly, employers are vital to the implementation of rideshare programs. Metro's Rideshare Advisory Subcommittee provides a forum for public and private sector individuals to provide direction for implementing potential programs throughout the region.

9. Regional Bicycle Plan - The implementation of the provisions of the bicycle element of the RTP is a shared responsibility of the State, local jurisdictions and Tri-Met. The actual construction of the bicycle facilities identified in Chapter 4 of the RTP (Figure 4-7, p. 4-22R) is the responsibility of the State and local jurisdictions. Local jurisdictions are required to identify this network in their local comprehensive plans, and any jurisdiction planning street improvements covered under ORS 366.514 that are proposed to not include bicycle facilities on roadways designated as regional bicycle routes must consult with Metro and other affected jurisdictions. Tri-Met is responsible for the installation of bike racks at the designated major transit stations and major park and ride lots specified in Chapter 4 of the RTP. Tri-Met and local jurisdictions are encouraged to install bicycle parking facilities at minor transit stations. In addition, local jurisdictions are encouraged to incorporate into their local comprehensive plans the supportive techniques identified in Chapters 1 and 4 of the RTP. Metro's regional bicycle funding committee will provide a forum to provide direction for designating projects for State Priority 3 and 4 bicycle funds used in the region.

## D. LOCAL COMPREHENSIVE PLAN COMPLIANCE

The comprehensive plan, adopted by the cities and counties within the Metro area, is the mechanism used by local jurisdictions to implement a number of elements of the RTP. It is the local plans which identify future development patterns that must be served by the transportation system. In addition, the local plans define the configuration of the highway system and identify needed investments.

Local comprehensive plans and future amendments to local plans should be consistent with all adopted RTP policies and guidelines for highway and transit system improvements and demand management programs as described in detail in Appendix A. Specific items in the RTP that require local comprehensive plan compliance are as follows:

- Highway System Design criteria described on p. 8-2;
- Highway Capacity and Project criteria described on pp. 8-3 and 8-4

- Transit System Designation criteria described on p. 8-4; and
- Transitway Implementation criteria described on pp. 8-4 and 8-5.
- Regional Bicycle Route designation on p. 8-6.

Activities described in the RTP that local jurisdictions are encouraged to pursue are:

- Policies support the 35 percent rideshare target for work trips;
- Demand Management Program Design criteria described on pp. 1-13 through 1-16;
- The rideshare, parking, land use controls and related activities described on pp. 4-19 through 4-22; and
- The protection of transitway right-of-way opportunities as described on p. 8-5; subsection 6.

All local plans must demonstrate consistency with the RTP by December 31, 1983 or as part of their normal process of completing their plan or during the next regularly scheduled update. It is Metro's intent to work closely with jurisdictions over the two-year period to obtain consistency in a cooperative manner. A local plan shall be considered in compliance with the adopted RTP if the following criteria are met:

1. It contains the specific items listed above as required for compliance; and

2. It does not contain any policies that directly conflict with those adopted in the RTP; and

3. It contains either:

   a. policies which support, encourage or implement one or more of the activities listed above that local jurisdictions are encouraged to pursue; or

   b. the local plan or the background materials adopted to support it contain an explanation of why none of the listed activities were considered feasible or appropriate for that jurisdiction.

After December 31, 1983 Metro's Regional Development Committee will review local plans for consistency. In specific cases where local plans (or future amendments) are determined to be inconsistent with the RTP, the specific inconsistency will be referred to JPACT for a recommendation. The subsequent Metro Council action could consist of any of the following recommendations:

1. a recommendation or requirement to change the local comprehensive plan's land use or transportation elements; and/or

2. an amendment to the Regional Transportation Plan; and/or

3. a recognition that the inconsistency exists, but that extenuating circumstances indicate that a plan change is not justified.

E. PLAN UPDATE, REFINEMENT AND AMENDMENT

The RTP establishes a unified policy direction for the transportation system and recommends a balanced program of highway, transit and demand management programs to implement that policy direction. The actions recommended, however, do not solve all the transportation problems and are not intended to be the definitive capital improvement program on the Minor Arterial/Collector system for the next 20 years. Rather, the RTP is intended to emphasize the projects necessary on the regional and local systems required to make the regional system work. Major developments located on the minor arterial and collecter system may require additional analysis and further improvements to provide an acceptable level of service. Furthermore, since many of the recommendations are designed to serve "expected" travel demands rather than "existing" travel demands, an on-going monitoring and update process is necessary. As such, Metro will formally update the plan on an annual basis. This annual consideration by the Metro Council will take place during the month of June. This will allow a timely interface with the annual update to the TIP in September of each year. Since the TIP, which schedules the expenditure of federal funding in the next five-year period and must be consistent with the adopted RTP, it is essential that the RTP be reaffirmed or amended prior to updating the TIP.

The type of changes that are expected to be incorporated into the RTP annually include the following:

- As the findings of major studies are produced, they will be recommended by a resolution of JPACT and the Metro Council. Annually, they will be incorporated into the Plan.

- During the course of the year, Metro and local staffs will conduct studies resulting in the identification of new highway, transit, bikeway and pedestrian improvements necessary to meet the objectives of the Plan. The additions to the RTP will be accompanied by an evaluation of the following issues:

    - objective(s) to be met by the improvement;
    - degree to which the proposal meets the objectives;
    - impact of the proposal on the balance of the transportation system; and
    - impact of the proposal on other plan objectives.

The amount of information required to answer these questions should be commensurate with the scope of the project. These additions will be amended into the RTP as part of the annual update.

- After a project has been incorporated in the RTP, it is the responsibility of the local sponsoring jurisdiction to determine the details of the project (design, operations, etc.) and reach a decision on whether or not to build the improvement based upon detailed environmental impact analysis.

  If this process results in a decision not to build the project, the RTP must be amended to delete the recommended improvement and an alternative must be identified to correct the problem. These changes will be incorporated in the RTP as part of the annual update. In particular, development throughout the region will be monitored to determine whether growth (and the associated travel demand) occurs as forecasted. Metro will review its population and employment forecasts annually and consider incorporating amendments for the following conditions:

  - national or regional growth rates differ substantially from those previously assumed;
  - significant changes in growth rate or pattern develop within jurisdictions;
  - a jurisdiction changes its land use plan (and, therefore, its "holding capacity" for new development) thereby increasing or decreasing the maximum allowable level of development in their jurisdiction.

- New information gathered during the course of the year on such issues as energy price and supply, population and employment growth, inflation and new state and federal laws may result in different conditions to be addressed by the Plan. These modifications will be incorporated as part of the annual update.

Major outstanding issues to be resolved at a later date and included as amendments to the Plan are as follows:

1. Funding - Alternative financing techniques and a complete funding strategy to implement the highway, transit and demand management improvements recommended in the Plan should be developed.

2. Population and Employment Growth - There is a need to re-examine the levels of growth expected in the region to determine: a) if that level of growth is still reasonable in light of the current recession; and b) if the transit ridership levels projected for the RTP, and therefore, the size, type and service associated with the RTP transit

system, are still reasonable. It is important that this issue be resolved prior to the next Westside Corridor (Sunset LRT) decision.

3. Westside Corridor Project - The preferred Westside Corridor alternative has been selected as the Sunset LRT with the Multnomah LRT and Sunset Busway options deleted. The next steps include completion of the engineering, final EIS and financial plan prior to a decision to proceed with construction.

4. Minor Arterials and Collectors - Based upon adopted local comprehensive plans and plans in the process of being updated, Metro will finalize a Minor Arterial and Collector system as a supporting document to the RTP. In conjunction with Washington County's comprehensive plan completion, a full minor arterial and collector improvement program will be established.

5. Bi-State LRT Evaluation - In conjunction with the Bi-State Policy Advisory Committee, Metro will determine the long range feasibility of LRT in the Northern Corridor, determine the interrelationship between service expansion in the I-5 and I-205 Corridors and recommend an interim bus trunk route improvement strategy.

6. Potential Effect of Telecommunications - Recognizing that new technology can significantly impact travel behavior, an examination of the potential effect of telecommuting on the expected level of future traffic demand will be undertaken.

7. Energy Contingency Plan - In conjunction with the Oregon Department of Energy, Metro will develop a contingency plan for dealing with short term gasoline shortages. Initially, this will involve adoption of a framework plan which will establish the need for refinement of key elements.

8. Goods Movement - Recognizing that freight movement is equally as important as people movement in an effective transportation system, Metro will examine access constraints to industrial development and existing truck travel constraints as a tool for setting priorities for needed highway improvements.

9. Handicapped Accessibility - In accordance with recent revisions to federal requirements for handicapped accessibility, Tri-Met will recommend an update to their plan for inclusion in the RTP.

10. Regional and Sub-Regional Trunk Route Refinement - The short and long range regional trunk route system will be evaluated to ensure the recommended travel speed criteria

are met. As needed, strategies to improve travel speed along specific trunk routes will be recommended. In addition, the criteria calling for trunk routes to operate at a speed no slower than one and one-half times off-peak highway speed will be evaluated to ensure it can realistically be achieved.

The long-range sub-regional trunk route system will be developed and incorporated into the RTP.

11. Five-Year Transit Development Program - Consistent with the RTP, Tri-Met will develop detailed transit service improvements and update their five-year plan annually. This will be submitted to Metro for endorsement and the key features will be incorporated into the RTP.

12. Southwest Corridor Analysis - Travel demands and alternative transit, highway and rideshare improvement strategies for the southwest corridor shall be examined to resolve a number of outstanding issues, including:

- the need for a regional trunk route connecting to the Tualatin Transit Station and the interrelationship with transit service to Tigard, Lake Oswego and along Kruse Way;
- traffic congestion on 99W through Tigard and the need for alternative major arterial routes;
- the function of the Kerr Parkway Improvement as a major connection;
- the need for additional highway capacity to serve major new development in Tualatin and Wilsonville; and
- the need to identify potential LRT alignments to ensure right-of-way is protected for future construction.

13. Demand Management Planning - The Rideshare Advisory Subcommittee will examine the candidate demand management strategies identified in the Policy Framework and develop recommendations on which are the most promising to pursue. In addition, they will provide guidance for the detailed development and implementation of the I-5 North and McLoughlin Boulevard Rideshare Programs and the Portland Flex-time program.

14. Access Control Plans - ODOT and Metro will examine existing access control plans on the principal arterial system and develop specific techniques to minimize direct property access. Major and minor arterials will be examined by Metro or the local jurisdiction as resources are available. Additional policy development for access control is required.

15. Light Rail Analyses - It is necessary to specifically identify alignments for the alternative LRT routes

specified in the adopted Long-Range Transitway System component of the RTP to provide local jurisdictions sufficient information to protect the right-of-way from encroachment. In addition, the process and priorities for the transition from bus trunk routes to transitways should be developed through an examination of factors relating to ridership, economy, densities and compatibility of adjacent land uses, and the staging of initial increments as opposed to future branches and extensions.

16. Build-Out Analysis - The local comprehensive plans are designed to accommodate more growth than will be realized by the year 2000 (the scope of the RTP). As such, it is necessary for long-range planning purposes to identify the travel demand associated with the full build-out of the local plans and examine the effects of this level of development on the transportation system beyond the year 2000.

17. Development Impacts - As development plans for specific sites are developed, conflicts between transportation and neighborhood objectives will arise. Localized impacts of development on the transportation system should be assessed and measures undertaken to resolve these conflicts.

18. 219th/216th Avenues - The function of this facility (minor or major arterial needs to be analyzed more fully in terms of its role in carrying regional travel from the area south and east of Hillsboro to the Sunset Highway.

19. Cornell and W. Burnside - Issues surrounding the functional classification and sizing of these facilities require resolution.

20. Terwilliger Boulevard and Terwilliger/Barbur Project - The functional classification of Terwilliger Boulevard and the impacts of the Terwilliger/Barbur project need to be resolved.

21. I-205/Powell Boulevard East of I-205 Circulation - Issues surrounding the functional classification and I-205 freeway access to Powell need to be addressed.

Several remaining projects have been identified in the planning process but require further review and consensus-building prior to inclusion in the RTP. It is anticipated that additional analysis of these projects will commence at a point after the adoption of the RTP or be included in the efforts to resolve the outstanding issues mentioned above.

East Burnside St. @ 60th Ave.
Hwy. 43 (so. of Sellwood Bridge)
Stafford Rd. Interchange @ I-5

Stafford Rd @ 65th Wilsonville
Elligson "S" Curve Realignment
Wilsonville Rd. @ I-5 (final)
Kerr Road Improvements
Hwy. 99W Bypass (Durham or Tualatin-Sherwood Rds.)
Beaverton-Tualatin Highway (Bridgeport-Martinazzi)
Holgate TSM (Hwy. 99E-82nd)
Lombard TSM (I-5-St. John's)
Union Ave. Parking Lots
Wheeler/Flint Intersection Improvements
Woodstock @ Foster
Terminal 4 Road (St. John's-N. Lombard)
S.W. 35th Ave. @ Vermont
RX Zone Residential Enhancement
South Portland Circulation Project
Barbur/Terwilliger Intersection Design & Bertha Upgrading
Inner Southwest Projects
Mt. Scott/Powell Butte Projects
Carman Dr. Improvements (Kruse Way-I-5)
Parkway Ave. II (Wilsonville)
Beckman Rd. I-5 Interchange (Wilsonville)
T.V. Hwy. - 99 W Connection
Glencoe-West Union Rd. Improvements
N. Ivanhoe St./Philadelphia
Portland Blvd. @ Greeley Ave.
Burnside/Sandy/12th Ave. Couplet
Johnson Creek Blvd. @ Harney
Hwy. 224 Grade Separation (Milw.-I-205)
Brookwood Avenue (Cornell-Evergreen)
Baseline Improvements (10th-Jenkins)
Access to Forest Park Estates
219th/216th Widening (Cornell-T.V. Highway)
New I-205 Interchange: Location and Arterial Access Improvements and Function
Arterial Connection from Oregon City Bypass to McLoughlin Boulevard.

4582B/279

APPENDIX A

## LOCAL COMPREHENSIVE PLAN COMPLIANCE WITH THE REGIONAL TRANSPORTATION PLAN (RTP)

The comprehensive plan, adopted by the cities and counties within the Metro area, is the mechanism used by local jurisdictions to implement a number of elements of the RTP. It is the local plans which identify future development patterns that must be served by the transportation system. In addition, the local plans define the configuration of the highway system and identify needed investments.

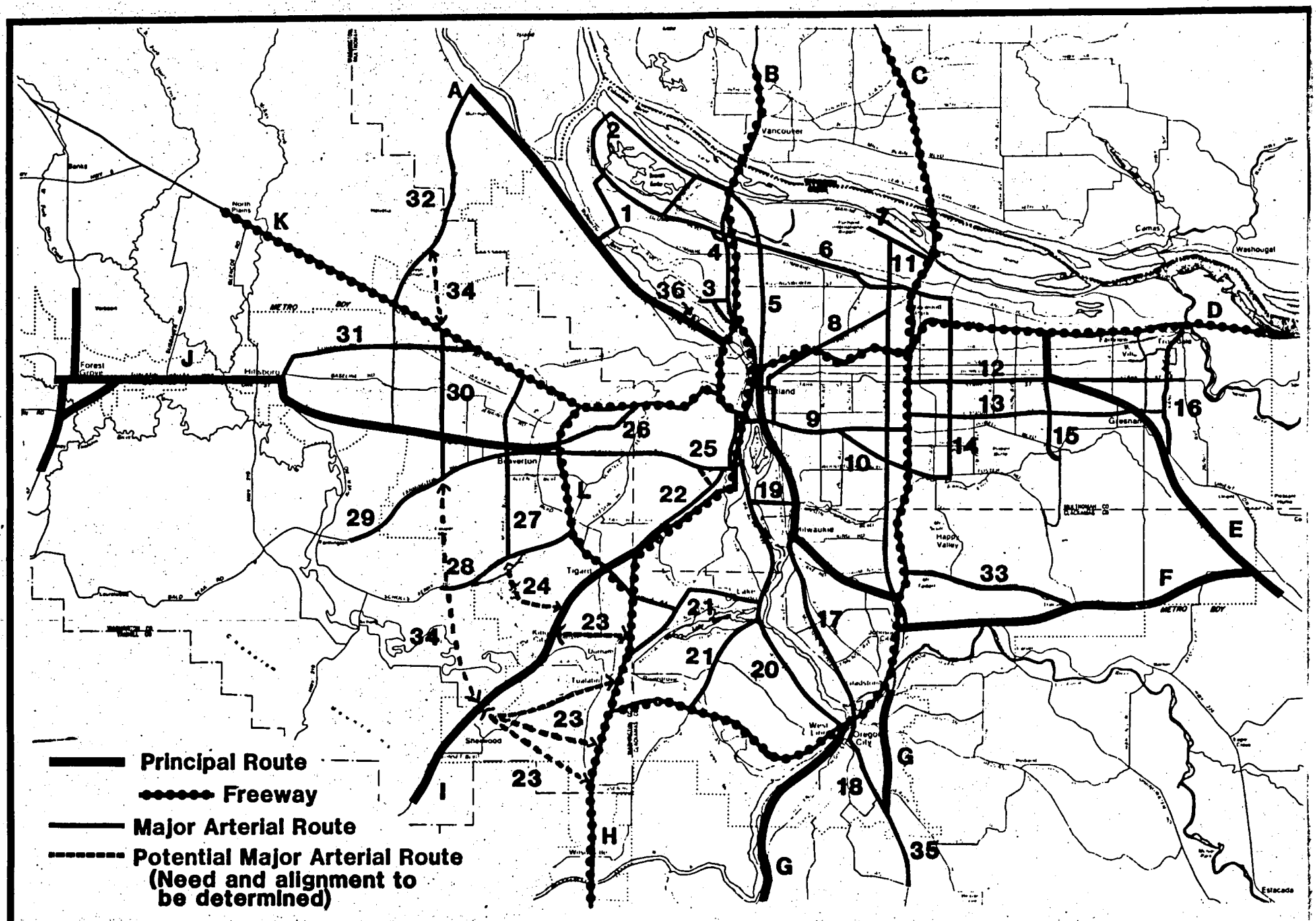
### A. REQUIRED ACTIVITIES

Local comprehensive plans and future amendments to local plans should be consistent with all adopted RTP policies and guidelines for highway and transit system improvements and demand management programs described in this Appendix. Specific items in the RTP that require local comprehensive plan compliance are as follows:

1. Highway System Design - It is essential for Metro and the local jurisdictions to designate the full arterial and collector system necessary to serve development of local comprehensive plans anticipated to the year 2000. The RTP includes criteria for a highway classification system (Attachment A) and adopts a map (Figure A-1) delineating the principal and major arterial components of such a system. In accordance with this, local jurisdictions are required to adopt a map delineating these highways in their jurisdiction and in so doing, are recommended to adopt Metro's classification categories and definitions. If, however, the jurisdiction elects to retain their own classification categories, they must provide for Metro's adopted principal routes and major arterials as shown in Figure 1. In addition, local jurisdictions are required to designate an adequate Minor Arterial and Collector system to meet two objectives of regional interest:

   - the minor arterial/collector system must adequately serve the local travel demands expected from development of the land use plan to the year 2000 to ensure that the Principal and Major Arterial system is not overburdened with local traffic; and
   - the system should provide continuity between adjacent and affected jurisdictions (i.e., consistency between neighboring jurisdictions, consistency between city and county plans for county facilities within city boundaries and consistency between local jurisdiction and ODOT plans).

   Metro's Classified Highway System map will consist of the Principal and Major Arterials defined in the adopted RTP and the Minor Arterials, Collectors and streets designated




METRO | Regional Transportation Plan

# PRINCIPAL ROUTES & MAJOR ARTERIALS

FIG. A-1

STAFF REPORT

Agenda Item No. 7.3

Meeting Date October 6, 1983

CONSIDERATION OF ORDINANCE NO. 83-161 FOR THE PURPOSE OF UPDATING THE ADOPTED METROPOLITAN SERVICE DISTRICT REGIONAL TRANSPORTATION PLAN

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Date: August 25, 1983

Presented by: Andy Cotugno
James Gieseking

FACTUAL BACKGROUND AND ANALYSIS

In July 1982, Metro adopted, by Ordinance, the Regional Transportation Plan (RTP). The adopted RTP calls for the Metro Council to formally update the RTP on an annual basis to incorporate as appropriate:

1. the findings, recommendations and/or decisions arising from major planning studies;
2. new highway, transit, bicycle and/or pedestrian improvements necessary to meet the objectives of the adopted RTP;
3. significant new information regarding energy price and supply, inflation, new federal and state laws, and/or the population and employment forecasts used in the RTP; and
4. additional or revised policies, strategies or expressions of regional intent regarding the transportation system, including the identification of additional outstanding issues to be addressed.

By adopting Ordinance No. 83-161, the Council recognizes the significant actions that have taken place regarding the region's transportation system in the past year and amends the adopted RTP to include the 1983 RTP Update (attached) which:

1. includes the policies, projects and guidelines previously adopted by Council resolution as part of the Regional Bicycle Plan - (Resolution No. 83-420) and designates the full text of the Regional Bicycle Plan as Appendix B of the RTP;
2. includes the policies, projects and decisions previously adopted by Council resolution associated with the Sunset LRT designation as the preferred transit trunk service alternative to connect downtown Portland with Beaverton (to 185th) including the Hall Boulevard (Allen-Greenway) improvement (Exhibit 1), the Skyline Boulevard Improvements (Exhibit 2) and the Brookwood Avenue improvements (Exhibit 3) (Res. No. 83-423);

3. includes new highway projects (Bluff Road, Davis Road Extension, 102nd Avenue) in the area north of Highway 212/224 in Clackamas County to provide the reliever and access roads called for in the Highway 212 FEIS; (Exhibit 4) and an improvement to Stark Street (221st-257th) to provide an acceptable level of service on this regional major arterial (Exhibit 5);
4. includes the following highway and transit projects previously adopted by Council resolution:

- East Burnside (90th-94th) - Resolution No. 82-353
- N.W. 23rd and Burnside Intersection Improvement - Resolution No. 82-353
- N. Columbia Frontage Road (Chautauqua-Delaware) - Resolution No. 82-353
- Foster Road (122nd-Jenne) - Resolution No. 82-353
- Vermont Corridor Improvements - Resolution No. 82-353
- N. E. Halsey (68th-81st) - Resolution No. 82-353
- Pacific Highway East (SPRR-Hedges) - Resolution No. 82-312
- N.W. Front/1st Everett - Resolution No. 82-368
- 185th Avenue (Rock Creek Boulevard-Sunset) - Resolution No. 82-375
- Dosch Road (Beaverton-Hillsdale Highway-Patton) - Resolution No. 83-390
- N. Vancouver Way (99E-Marine Drive) - Resolution No. 83-390
- 122nd and Burnside Park and Ride - Resolution No. 83-412
- The addition of Forest Grove to the region's FAU boundary - Resolution No. 83-398
- Downtown Portland LRT related improvements - Resolution No. 83-395

5. Adjusts the Regional Highway System route designation consistent with adopted local comprehensive plans as follows:

- designates Cornell Road from the Sunset Highway to Hillsboro as a Regional Major Arterial route;
- downgrades Cornelius Pass Road from Sunset to T.V. Highway from a regional major arterial to a non-regional facility;
- designates 185th Avenue from Sunset to Cornelius Pass Road as a potential Major Arterial (need and alignment to be determined);
- designates Old Scholls Ferry Road (135th-Scholls Ferry Road) as a regional Major Arterial route;
- downgrades Scholls Ferry Road (135th - Old Scholls Ferry Road) from a regional Major Arterial to a non-regional facility;
- designates 257th Avenue (Powell Valley Road to I-84) as a regional Major Arterial;

- downgrades 242nd Avenue (Powell to I-84) from a regional Major Arterial to a non-regional facility;
- designates Stark Street (242nd to Troutdale Road) as a regional Major Arterial;
- designates Division Street (US 26-257th) as a regional Major Arterial;
- designates 182nd (Powell-190th) as a regional Major Arterial;
- corrects the omission of Denver Avenue (Columbia Boulevard to I-5) and Argyle Way (Interstate Avenue - Columbia Boulevard) as regional Major Arterials in the document adopted in 1982;
- includes the Norwood/I-5 to Highway 99W, Stafford/I-5 to Highway 99W, and Ruesser/185th alignments as regional Major Arterial connections under consideration from I-5 to Highway 99W and T.V. Highway, recognizing the need, operational feasibility, and alignment of these routes are yet to be determined and will be examined as part of the S.W. Corridor Study effort.

TPAC and JPACT have reviewed this update as amended and recommend adoption of the attached Ordinance. JPACT adopted amendments to include the following outstanding issues in Chapter 8 of the document: #2, Population and Employment Growth; and #6, Potential Effect of Telecommunications.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends adoption of the attached Ordinance.

COMMITTEE CONSIDERATION AND RECOMMENDATIONS

On September 12, 1983, the Regional Development Committee unanimously recommended Council adoption of Ordinance No. 83-161.

JG/srb
9282B/353
09/16/83

EXHIBIT 1

# HALL BOULEVARD WIDENING PROJECT-
# ALLEN BOULEVARD TO GREENWAY

## Project Description

This project will consist of improving Hall Boulevard to City standards from approximately 200 feet south of Allen Boulevard to approximately 400 feet north feet of Greenway in South Beaverton. The Beaverton Area General Plan identifies Hall Boulevard as "B" standard, i.e. 62 feet of pavement within an 86-foot right-of-way. This will provide four travel lanes plus a continuous left turn lane. Preliminary traffic analyses have also identified the need for right turn lanes at certain intersections. Also included would be drainage facilities, sidewalks, planter strips and provisions for bicycle transportation and mass transit. Project cost estimated at $2,140,000.

## Problem Statement

Presently Hall Boulevard is a two-lane, 28-foot roadway from generally Greenway to Hart Road. The length between Hart and Denney is three lanes. The length from Denney to Allen varies in pavement width but with the exception of short left turn refuges at the Denney, Hart and 22nd Street intersections, the roadway is two-lane without turn lanes. This lack of turn lanes and areas of poor site distance creates hazardous driving conditions. Current volumes cannot adequately be served with the present roadway width. Industrial and commercial land development plans in the immediate vicinity of the project will produce substantially higher volumes in the near future. Current volumes along the project length of Hall Boulevard are 12,000 to 16,000 ADT. This figure is projected to increase to 26,000 to 29,000 ADT by the Year 2000, primarily due to employment growth to the immediate south of the project. Roadway capacity must be increased in order to provide access at an acceptable level of service to these existing and proposed employment and shopping centers.

Currently pedestrian facilities along Hall Boulevard are inadequate - for much of the project length no pedestrian facilities exist at all. Shoulder widths along much of the project length are two feet or less. Likewise, bicycle facilities are lacking and the narrow pavement width creates a dangerous situation.

Tri-Met Line #77, a major circumferential route in the transit system, operates along this section of Hall Boulevard. Yet poor pedestrian facilities prevent this excellent service from being maximized. Because the project area features topographic variations, storm water runoff and ponding is also a significant problem due to inadaquate drainge facilities along this section of Hall Boulevard.

## Project Objectives and Expected Results

Several transportation service, safety and land development objectives are intended to be attained by the Hall Boulevard Widening Project. Hall Boulevard is a principal travel route between Washington Square, idustrial and employmnt centers in South Beaverton and the City Center. Along with Cedar Hills Boulevard to the north, this facility is a continuous route between the Sunset Highway, the Tualatin Valley Highway, Highway 217 and Pacific Highway. Thus, the proposed project would help provide inter-district mobility benefits.

A primary objective of the project is to provide access to major commercial centers in the immediate project area which features regional shopping and employment opportunities. Current and proposed commercial centers in the immediate project area include Washington Square, Washington Center, Koll Business Center and the Creekside-Nimbus Industrial Parks. Most of the currently vacant commercial lands in the project area are expected to develop in a very near timeframe. Approximately 2.8 million gross square feet of development exists in the greater project area. Another 1.5 million gross sqaure feet is proposed or pending approval.

The project is expected to attain traffic mobility objectives through the provision of additional street and intersection capacity thereby reducing current congestion and delay problems. Current traffic volumes are projected to increase very rapidly primarily due to employment growth at Creekside-Nimbus Industrial Parks and Washington Center. It is expected that the proposed project design will accommodate current and future volumes at an adequate level of service. An improved Hall Boulevard will also help supplement regional mobility currently provided by Highway 217, one of the highest projected volume growth freeways in the metropolitan region.

Another major objective of the project is safety. The project through the provision of turn lanes and improved site distance will help relieve current traffic safety problems. Adequate facilities for pedestrians and cyclists will be a priority feature in all design alternatives.

The bus service on Hall Bolevard is an important link in the transit network. The role of transit service on Hall Boulevard is expected to increase in the near future with the construction of a transit center at Washington Square. Line #77 is the major circumferential transit route on the westside of the metropolitan region. By the year 2000 (or earlier), this transit line will connect transit centers at Lake Oswego, Tigard, Washington Square, Central Beaverton and Cedar Hills, with service continuing into Northwest Portland and through-routed to Northeast Portland. Approximately 8,100 person trips per day are expected along the project section of Hall Boulevard. Any design alternatives for Hall Boulevard will satisfy these transit service objectives.

## Environmental Impact Reconnaissance

The environmental impacts of the project are expected to be primarily related to right-of-way acquisition and issuesrelated to proximity to residential areas. Approximately 66 parcels are expected to be involved in right-of-way negotiations, although approximately half of the project length has sufficient right-of-way available to implement the City standards. Although the project

interconnects commercial and industrial areas to the north and south properties adjacent to the project length are primarily residential. Approximately 55 percent of the frontage is zoned single family, 40 percent is zoned multi-family and 5 percent is zoned commercial. It is extremely unlikely that the project will stimulate zoning changes along the length of the project.

Due to the elimination of congestion and the increase of transit service promoted by this project, air quality impacts are expected to be minor despite that traffic volumes will nearly double. Noise impacts will be judged by noise standards established for residential land uses. No parks, schools or hospitals are within 400 feet of the proposed project.

Consistency with Local Plans

The project is consistent with the Beaverton Area General Plan. Hall Boulevard has been identified as a major arterial since the inception of the Plan in 1972. Periodic amendments to the Plan have not altered this status. Sufficient right-of-way for the project has been obtained through dedications in the development approval process of the City since that date. Older developed properties in most cases have not provided the needed right-of-way. Hall Boulevard is essentially the spine of the circulation system for South Beaverton and is intended to serve the land uses and development densities specified in the General Plan.

This project is also consistent with the Capital Improvements Program of the City. The project carries a status of #3 priority in FY 1983-1984. Priorities #1 and #2 are already underway or have been postponed. This high-priority status represents the importance of this project. In 1979, the City requested and received jurisdiction of Hall Boulevard from the Oregon Department of Transportation. The primary objective of this action was to insure a high level of service in maintenance responsibilities.

The project is proposed for inclusion in the RTP as a result of the Westside Corridor Project findings. Hall Boulevard is currently recognized in the RTP as a Regional Trunk Route for transit service and necessary for successful implementation and expansion of the timed-transfer system for the westside metropolitan area. Based on RTP criteria, Hall Boulevard would likely be classified as a minor arterial, although its major transit role could elevate its status to a major arterial. The Function Classification System for Washington County identifies Hall Boulevard as a minor arterial.

## 2b. Sylvan Interchange Area

### Project Description

The proposed porject(s) would: (1) signalize and widen (one additional lane in each direction for 400-500 feet south of the intersection) the Scholls Ferry Road/ Raab Road intersection; (2) relocate the Canyon Court/Skyline Boulevard intersection northward to the vicinity of S.W. Montgomery Street; and (3) widen Skyline Boulevard to accommodate an additional southbound lane from S.W. Montgomery Street to the westbound Sunset Highway on-ramps (Figure 2b-1). Designs in this area should avoid conflicts with potential transit station and park and ride lot requirements. Estimated costs for portions (1) and (2) of this project are $2,460,000. No cost estimate is available for portion (3).

### Problem Statement

Improvements to the ramp capacity at this interchange (see Project #2) and the introduction of a transit station and a (possible) park and ride lot in the area require additional improvements to accommodate the increased ramp volumes and provide adequate transit and traffic circulation.

### Project Objectives and Expected Results

- improve access to Sunset Highway interchange at Sylvan;
- eliminate conflicts created by controlled intersections near ramp terminals.

### Environmental Impact Reconnaissance

Acquisition and Relocation Impacts: Minor amounts of additional right-of-way would likely be required for the proposed projects. The commercial structure (gas station) located north of the off-ramp and west of S.W. Skyline Boulevard could possibly be affected (Figure 2b-1) by portion (2) of the project. Portion (1) may impact parking for the commercial development east of Scholls Ferry Road.

Impact on Land Use and Zoning: The current function of the facility would not be altered as a result of the proposed project. Therefore, the character of the surrounding land uses, which are primarily commercial, would not likely be impacted.

Air Quality Impacts: There are no sensitive receptors in the immediate project area likely to be significantly affected by the proposed project. The expected increase in vehicle volumes by the year 2000 would likely occur with or without the project. Improvements in travel flows on the facilities would likely reduce emissions from levels associated with a "no-build" condition.

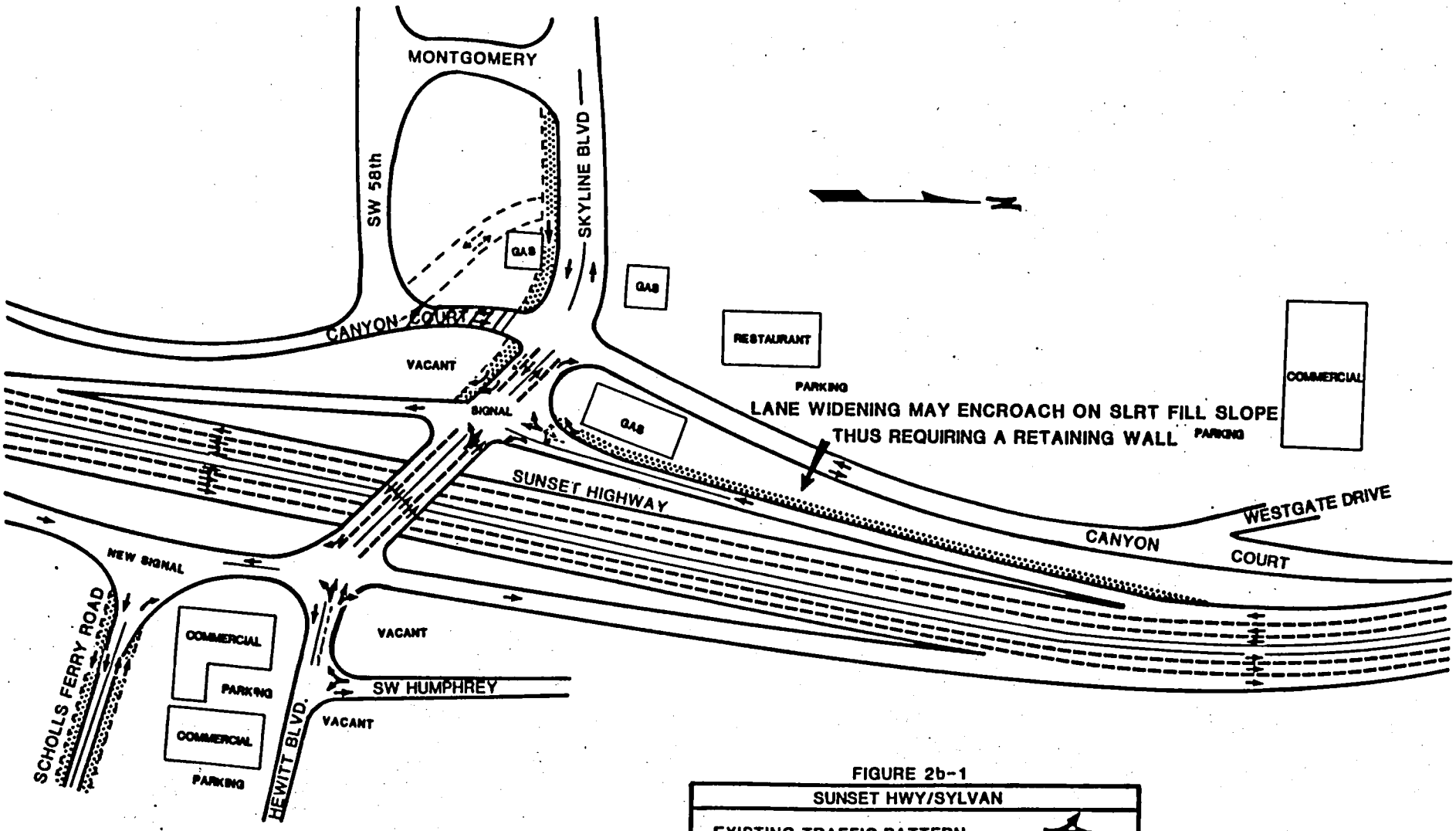



FIGURE 2b-1

| SUNSET HWY/SYLVAN | |
|---|---|
| EXISTING TRAFFIC PATTERN | |
| PROPOSED TRAFFIC PATTERN | |
| PROPOSED LANE ADDITION | |
| LAND TO BE VACATED | |

Noise Impacts: (See Air Quality above.)

Water Quality Impacts: There are no creeks or bodies of water crossed by or adjacent to the project that would likely be affected by the proposed improvements.

Impact on Wetlands: No portion of the project is contained in a wetland as identified in the Westside Corridor DEIS.

Flooding Impacts: No portion of the project is contained within the 100-year floodplain.

Traffic Impacts: The proposed improvements are not expected to increase travel volumes above levels projected for the facility without the project.

Impact on Energy: There would likely be no significant impact on transportation-related energy consumption as a result of the proposed improvements.

Impact on Historic Properties and Parklands: There are no historic properties or parklands in the project area that would likely be impacted by the proposed improvements. South of the project area, the Nathan Jones Cemetery (S.W. Grant and Hewett Boulevard) is considered a historical site of local significance (Westside Corridor DEIS).

Impacts Caused by Construction: Commercial areas surrounding the intersection could likely experience temporary access impacts during the construction phase.

Visual Impacts: No new structures are proposed. There would likely be no significant change in the visual character of the project area.

Community Disruption: Existing patterns of circulation would not likely be altered by the proposed project and access to service areas and community facilities would not be likely to change significantly.

Safety and Security: The proposed improvements could be expected to result in a reduction of auto and pedestrian accidents and include adequate provision for safe and secure operations.

Secondary Development: The proposed project would not be expected to cause changes in surrounding land uses, vehicle access or traffic circulation patterns in the project area. As a result, any secondary development that would be likely to occur would be compatible with current and planned land uses.

Consistency with Local Plans

Sunset Highway is defined in the adopted RTP as a principal regional arterial to carry statewide and cross-regional traffic to and from the Oregon coast. Identified by Multnomah County, the proposed project is not included in the RTP.

59. Brookwood Avenue (Evergreen - T.V. Highway)

Project Description

The proposed project is to construct an extension running north from the point where Brookwood's north leg currently terminates (between Baseline and Cornell) to Evergreen Boulevard. This will be a two-lane facility with turn channelization at Cornell and Baseline. Existing sections of Brookwood will be upgraded to provide the same qualities as those in the extension design. This includes shoulders, a bikepath, and sidewalks. Estimated cost for the project is $4.366 million. A possible alternative connection in the northern section into 242nd/Shute Road to form a north/south arterial from the Sunset Highway to T.V. Highway was mentioned by Washington County.

Problem Statement

This area is in need of additional north/south access between 216th/219th and Oak/10th. The lack of sufficient north/south access is causing an increase in east/west traffic movement. The intention is to correct this situation by providing an additional north/south facility.

Project Objectives and Expected Results

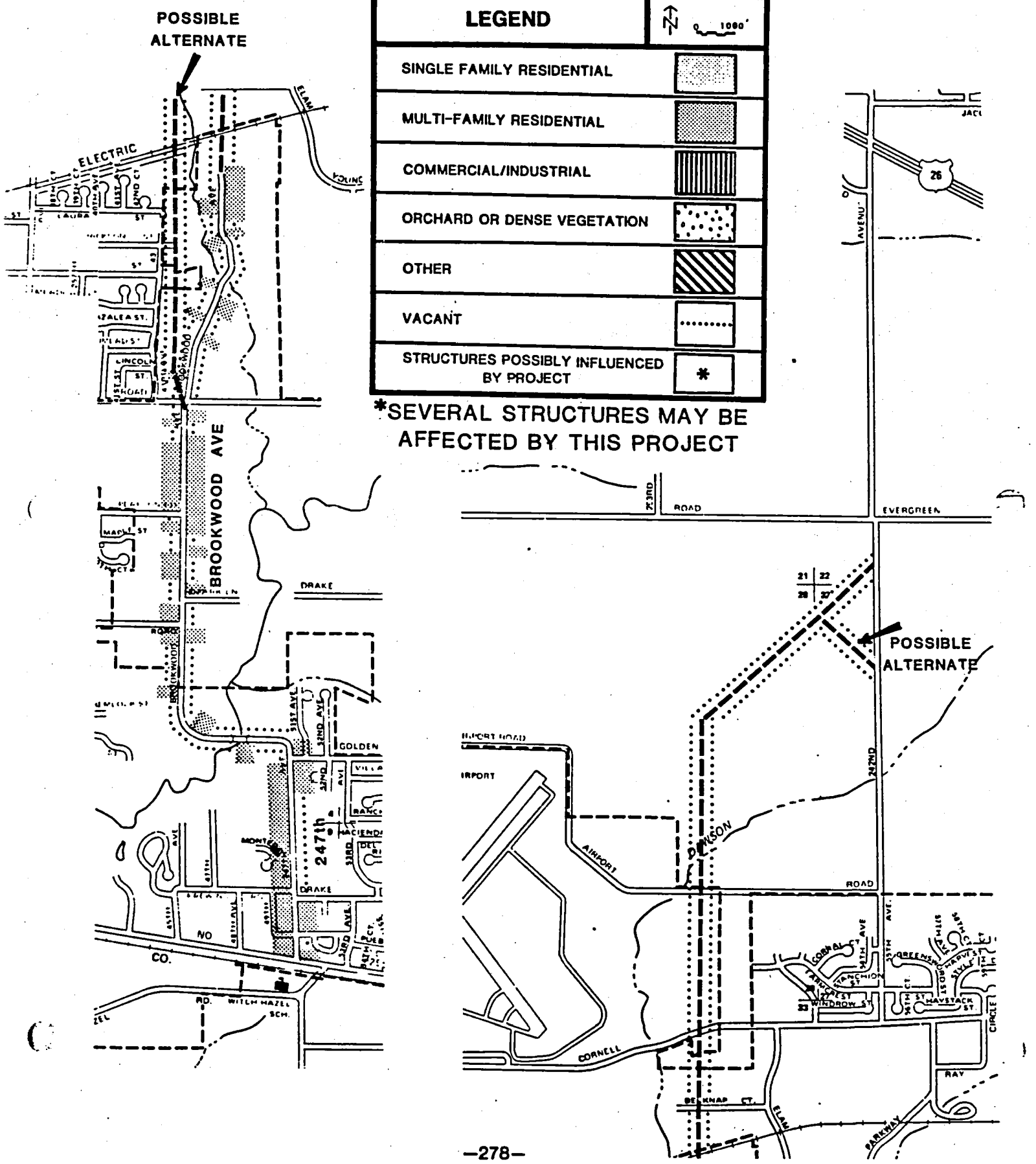
The Brookwood extension and upgrading will relieve congestion on 216th and reduce vehicle demand on Cornell and Baseline Road by providing a more direct north/south arterial to ameliorate over-utilization of existing east/west routes that currently must be used for this movement.

Environmental Impact Reconnaissance

Acquisition and Relocation Impacts: Significant amounts of additional right-of-way will be required for this project. Residential structures located south of Laura and north of Baseline will likely be affected by the project. Residential and commercial property such as front yards, fences and parking lots will likely be affected by the project in the sections from Laura to Baseline (Figure 59-1).

Impact on Land Use and Zoning: Improved access to Cornell from the east Hillsboro area will be provided by this project. The current function of the facility as a disconturious rural local sheet would be changed as a result of this project. As a result, the surrounding land use, which is primarily low density residential, would likely be affected by this improvement (Figure 59-2).

# FIGURE 59-1
## CURRENT LAND USES ADJACENT TO ROADWAY
## BROOKWOOD AVE. / EVERGREEN-T.V. HWY.



BROOKWOOD AT NORTH END OF ROADWAY


BROOKWOOD SOUTH OF BASELINE ROAD LOOKING SOUTH

FIGURE 59-2

Air Quality Impacts: Sensitive land uses in the project area are low density rural residential structures. An increase in the number of daily vehicle trips can be expected, producing an increase in emissions in the area.

Noise Impacts: (See Air Quality above.)

Water Quality Impacts: Brookwood would cross creeks three times in this section: Dawson Creek (north of Airport Road); Dawson Creek (opposite Brogden); and Rock Creek on structure (northwest of Golden). Increased turbidity during construction could likely be expected.

Impact on Wetland: No portion of the project is contained in a wetland as identified in the Westside Corridor DEIS.

Flooding Impacts: This project runs through the 100-year floodplain of Dawson Creek (twice) and Rock Creek. The roadway currently exists for approximately 30 percent of the project. (From T.V. Highway to Baseline Road.) The existing roadway crosses the Dawson Creek and Rock Creek floodplains while the portion to be built parallels and crosses (north of Airport Road) the Dawson floodplain. The proposed project would add additional impervious surface area to the floodplain.

Impact on Energy: There would likely be no significant impact on transportation-related energy consumption as a result of the proposed improvements.

Traffic Impacts: Changes in traffic patterns as a result of the more direct north/south access, as well as increase in travel volumes on Brookwood would likely occur as a result of this improvement.

Impact on Historic Properties and Parklands: There are no historic properties or parklands in the project area that would likely be impacted by the proposed improvements.

Impacts Caused by Construction: Residential areas along the facility for much of the project would likely experience temporary access impacts during the construction phase.

Visual Impacts: The construction of an upgraded facility in the section would likely impact the current visual character of the area.

Community Disruption: Existing patterns of circulation would be altered by the project. Access to service areas and community facilities would not be likely to change.

Residential areas located south of Laura and north of Baseline could be affected in ways that would likely change the social or economic character of the community.

Safety and Security: Proposed project could result in an increased auto and pedestrian accidents, due to the increase travel volumes, but includes adequate provision for safe and secure operations.

Secondary Development: The proposed project would likely cause changes in vehicle access or traffic circulation patterns in the area, and, as a result, secondary development could occur that is not compatible with current land use.

Consistency with Local Plans:

Brookwood Avenue is defined in the adopted RTP as a sub-regional facility. Developed as part of the Westside Cooridor DEIS effort, the proposed project is not included in the RTP and was identified by the Washington County Department of Public Works as a needed improvement. It is included in the Hillsboro Comprehensive Plan.

EXHIBIT 4

Highway 212/224 North Access Improvements

The Bluff Road (102nd-142nd), 102nd Avenue (Clackamas Road-Lawnfield) and Hubbard Lane (Davis extension: 122nd-Highway 212) projects are the improvements called for in the Highway 212 project EIS to provide industrial/residential access north of Highway 212 and a reliever function for Highway 212 to reduce local access conflicts with regional through movements.

EXHIBIT 5

## Stark Street (221st to 257th)

### Project Description

This section of Stark is currently two lanes. The proposed project would widen Stark to four lanes with curbs and sidewalks.

### Problem Statement

Continued development in the Gresham-Troutdale area has led to increasing traffic volumes on Stark Street. Stark is presently operating at capacity with 860 eastbound p.m. peak vehicles east of 221st and more increases are expected in the near future. Gresham Community Hospital, scheduled to open in mid-1984 and located between 242nd and 257th Avenues, is expected to generate 1,600 daily vehicle trips after completion of the first phase and 7,100 daily trips when fully developed in 1990. This alone represents a 44 percent increase over 16,000 current daily vehicle trips.

The current peak-hour capacity is 900 vehicles per hour by direction. The published RTP-committed system projection is 1,450 eastbound p.m. peak-hour vehicles east of 221st with a v/c ratio of 1.6.

### Project Objectives and Expected Results

This project is intended to provide the roadway capacity on Stark needed to accommodate projected growth in the Gresham-Troutdale area. Widening Stark to four lanes would provide a capacity of 1,800 vehicles per hour by direction.

### Impacts on Balance of System

The lack of adequate capacity on Stark would create a bottleneck where Stark narrows to two lanes and could cause significant diversion to adjacent parallel facilities with consequent adverse effects on traffic volumes, travel times and air quality in those corridors.

### Impact on Objectives

This segment of Stark will not have the capacity in the near future to operate at the level of service required in the RTP. Although Stark is designated as a major arterial from I-205 to 242nd in the adopted RTP, Multnomah County has proposed an RTP amendment to designate Stark as a major arterial from 242nd to Troutdale Road and this designation is included in the 1983 Update.

The proposed project would allow Stark to operate as a major arterial and at the level of service required in the RTP. Trip diversion to parallel facilities, which would take place without the

project, would negate their RTP-defined function as minor arterials or below. Such facilities should be oriented only toward travel with or between adjacent subareas.

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Councilor Waker asked that information be provided on what the lost revenue would be if the new language were adopted. Mr. Durig said he would return with an estimate, although he believed it would have a minimal impact.

The ordinance was passed to second reading on October 27, 1983.

7.2 Consideration of Ordinance No. 83-162, amending the Urban Growth Boundary (UGB) in Clackamas County for Contested Case No. 81-2. (First Reading)

Councilor Kafoury reviewed the history of the case. She noted that the condition that annexation to the Metropolitan Service District occur before the UGB was amended had been satisfied.

Motion: Councilor Kafoury moved adoption of Ordinance No. 83-162. Councilor Williamson seconded the motion.

The ordinance was then read the first time, by title only.

There was no public testimony or Council discussion.

The ordinance was passed to second reading on October 6, 1983.

7.3 Consideration of Ordinance No. 83-161, for the purpose of updating the Adopted Metropolitan Service District Regional Transportation Plan. (First Reading)

Councilor Williamson reported that TPAC and JPACT had recommended approval as well as the Regional Development Committee.

Motion: Councilor Williamson moved adoption of Ordinance No. 83-161. Councilor Kirkpatrick seconded the motion.

The ordinance was then read the first time, by title only.

There was no public testimony.

Councilor Bonner commented that the RTP included the Bike Plan and a good agreement on the light rail corridor. He said it was a noteworthy document in those areas and complimented the people who had been involved.

The ordinance was passed to second reading on October 6, 1983.

7.1 Consideration of Ordinance No. 83-162, amending the Urban Growth Boundary (UGB) in Clackamas County for Contested Case No. 81-2. (Second Reading)

The ordinance was read a second time, by title only.

Mark Brown, Regional Services Planner, stated no new information had been received since the first reading of the ordinance.

There was no Council discussion or public testimony.

Vote: The vote on the motion to adopt Ordinance No. 83-162, made by Councilors Kafoury and Williamson on September 29, 1983, resulted in:

Ayes: Councilors Banzer, Bonner, Deines, Etlinger, Hansen, Kelley, Oleson, Waker, and Williamson.

Nays: None.

Absent: Councilors Kafoury, Kirkpatrick, and Van Bergen.

7.2 Consideration of Ordinance No. 83-161, for the purpose of updating the adopted Metropolitan Service District Regional Transportation Plan. (Second Reading)

Councilor Etlinger asked which document, the Regional Transportation Plan (RTP) or the Transit Development Program (TDP), had the most significance as far as transit policy. Andy Cotugno, Transportation Director, responded that the Regional Transportation Plan was a broad view of what the overall transit system should do and the Transit Development Program followed the policies in the RTP but was more detailed with short-term transit system improvements as opposed to long term ones.

Councilor Etlinger then asked when it was appropriate to amend the RTP to incorporate additional long range transit policies. Councilor Williamson responded that the RTP could be amended at any time as long as it followed a reasonable procedure for amendment.

Councilor Bonner said he thought what Councilor Etlinger was aiming for was a process which allowed review of the more specific transit development policies to determine whether they were or were not in compliance with the RTP.

METRO

**METROPOLITAN SERVICE DISTRICT**
Providing Zoo, Transportation, Solid Waste and other Regional Services

October 10, 1983



County Administrator
Washington County
150 N. First Avenue
Hillsboro, Oregon 97123

Enclosed are true copies of the following ordinances adopted by the Council of the Metropolitan Service District on October 6, 1983:

Ordinance No. 83-161, An Ordinance for the purpose of updating the Adopted Regional Transportation Plan.

Ordinance No. 83-162, An Ordinance amending the Metro Urban Growth Boundary (UGB) in Clackamas County for Contested Case No. 81-2.

Please file these ordinances in the Metro ordinance files maintained by your County.

Sincerely,

Everlee J. Flanigan
Clerk of the Council

Enclosure

*527 SW Hall St.*
*Portland, OR*
*97201*
*503/221-1646*